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GENERAL (incl. Statistics)

4948. [Anon.] **Bulletin of the American Psychoanalytic Association.** (Place of publication omitted): Amer. Psychoanalytic Association, 1937-1938. Volume 1. Pp. 123.—The official directory of the American Psychoanalytic Association, minutes of the meeting in Washington, D.C., 1937, minutes of the meeting in Chicago, 1938, reports of constituent societies, reports of recognized training institutions, and membership lists of constituent societies are included. The frontispiece is a recent portrait of Sigmund Freud.—R. R. Willoughby (Brown).

4949. [Anon.] **Presidents of the Association.** Amer. J. Orthopsychiat., 1939, 9, 435-440.—Biographies of Ralph Purnell Truitt, 10th president of the American Orthopsychiatric Association (1935-1936), Edgar A. Doll, 11th president (1936-1937), and George J. Mohr, 12th president (1937-1938). Portraits.—R. E. Perl (New York City).

4950. Bentley, A. F. **Situational treatments of behavior.** J. Phil., 1939, 36, 309-323.—The author sees corroboration of his point of view in the work of Pavlov, Klüver, A. Meyer, Kantor, and Lewin, each of whom he discusses. This indicates, he says, a strong recent trend toward the localization of behaviors in organic-environmental situations rather than in organisms separately viewed. When vitalism is fully overcome, then a situational inquiry into behaviors may be differentiated from other situational physiological inquiries by the greater complexity of the processes of organism-environment studies. A necessary condition to this is that the behavioral isolation of the organism must be overcome, and this without any remaining adhesion to either "mental" or "material" wordings.—J. G. Miller (Harvard).

4951. Boring, E. G., Langfeld, H. S., Weld, H. P., & others. **Introduction to psychology.** New York: Wiley, 1939. Pp. xxii + 652, \$3.00.—This book is a revision and enlargement of *Psychology: A Factual Textbook*, brought out in 1935 by the same editors as an introductory text for college courses in psychology. Included in the present volume, in the order named, are chapters on the social functions of the individual; personality; motivation; emotional responses; the response mechanism; response; learning; retention; recollection and imagination; thought; perception; spatial perception; perception of time and movement; sensation; vision; audition; smell; taste, and somesthesia; the nature of man. As before, the editors have aimed at safeguarding accuracy in exposition by employing as collaborators experts in the relevant fields. These collaborators have given

the first formulation to the chapters, which are then revised by the editors where considered desirable in the interests of general unity. The order of exposition reverses that of the previous volume, beginning with conduct, motivation, and personality, and ending with perception and sensation. This procedure reflects the present view of the editors that "since the student comes to psychology with some knowledge of the functioning of the organism in a social environment, it is best in an elementary course to begin with this knowledge."—C. K. Trueblood (Harvard).

4952. Brown, P. F. **Characteristics of pneumatic recording systems.** J. gen. Psychol., 1939, 20, 505-509.—The response of a pneumatic kymograph recording system installed in an oscillograph was studied. Effects of capillary-tube damping in the pneumatic line, of length of pneumatic line, of type of tip on the rubber diaphragm, of ventilation in the line, and of other than capillary damping in the line were noted.—C. N. Cofer (Brown).

4953. Brown, P. F. **Kymograph action current recordings.** J. gen. Psychol., 1939, 20, 511-517.—Five types of kymograph recorders or magnetic markers used for action current work are described.—C. N. Cofer (Brown).

4954. Brugmans, H. J. F. W. **The psychic unconscious and the psychological unconscious.** Acta psychol., Hague, 1939, 4, 241-274.—The psychic unconscious is inferred from experiences on which no light is thrown by systematic psychology, while the psychological unconscious is both wider in scope and is that on which the psychic variety depends. Physiological fact has nothing to do with either.—R. C. Givler (Tufts).

4955. Canella, M. F. **Orientamenti della moderna biologia.** (Orientations in modern biology.) Riv. Psicol. norm. pat., 1938, 34, 227-351.—Genetic and mutation theories in biology are criticized. The author favors a theory based on Lamarckian eclecticism and advocates the creation of a laboratory for the study of Lamarckian variations pertaining to the inheritance of acquired characteristics.—T. M. Abel (New York City).

4956. Cisbani, R. **Contributi alla teoria delle medie. II.** (Contributions to the theory of means. II.) Metron, 1938, 13, 3-20.—This article contains two further notes relative to the subject, under the headings: (1) concerning a necessary and sufficient condition for a calculated power mean of n quantities to be between their maximum and minimum; and (2) the extension of the concept of the arithmetic mean to discontinuous series.—N. R. Barilett (Brown).

4957. Conklin, E. G. Biographical memoir of Henry Herbert Donaldson, 1857-1938. *Biogr. Mem. nat. Acad. Sci.*, 1938, 20, 229-243.—An account of Donaldson's life and work, with an inclusive bibliography of his writings. Portrait.—R. M. Gagné (Brown).

4958. DuBois, P. H. Note on the calculation of the chi-square test for "goodness of fit." *Psychometrika*, 1939, 4, 173-174.—By using $\chi^2 = \frac{1}{N} \sum \frac{f_0^2}{\% f}$

N as a formula, where f_0 is the observed frequency, and $\% f$ is the percentage of theoretical frequency in each step interval, for the calculation of the chi-square test for "goodness of fit" it is possible, with certain machine short-cuts, to eliminate the following computations: deviations of the bottoms of the steps in score units, theoretical frequencies, differences between observed frequencies and theoretical frequencies, squares of these differences, and division of the squares by the theoretical frequencies. The saving in time is estimated to be at least 50%.—G. F. J. Lehner (Vermont).

4959. Dwyer, P. S. The contribution of an orthogonal multiple-factor solution to multiple correlation. *Psychometrika*, 1939, 4, 163-171.—A method is indicated by which multiple-factor analysis may be used in determining a number, r , and then in selecting r "predicting" variables out of n variables so that each of the remaining $n - r$ variables may be predicted almost as well from the r variables as it could be predicted from all the $n - 1$ variables.—(Courtesy *Psychometrika*).

4960. Fay, J. W. American psychology before William James. New Brunswick: Rutgers Univ. Press, 1939. Pp. x + 240. \$2.50.—The years from 1640 to 1890 are divided into three periods: (1) 1640-1776, theology and moral philosophy; (2) 1776-1861, intellectual philosophy; and (3) 1861-1890, British and German influences. In the first period the writings of William Brattle, Samuel Johnson, Jonathan Edwards, and Thomas Clap are stressed. In the second period attention is given to J. D. Gros, Witherspoon, Smith, Hedge, Rush, Beasley, and Burton, as well as to the various textbooks by Upham, Rauch, Schmucker, Mahan, Hickok, Wayland, and Haven. In the third period the writings of James Rush, Porter, Dewey, McCosh, Bowne, and Hill are emphasized. Appendices contain notes, a list of American works and foreign sources, and a bibliography.—W. S. Hunter (Brown).

4961. Fender, F. A. A precision device for faradic stimulation. *Science*, 1939, 89, 491-492.—A description and wiring diagram are given of a device to administer faradic current which is accurately characterized as regards intensity, frequency, and wave form.—F. A. Mote, Jr. (Brown).

4962. Ferree, C. E., & Rand, G. A glareless illuminated holder for visual-acuity test charts with variable intensity of light. *Amer. J. Ophthal.*, 1939, 22, 399-406.—A practical chart holder with controlled illumination devised to eliminate glare, and recommended for commercial acuity tests and public

schools, is described in detail, with illustrations.—D. J. Shaad (Boston, Mass.).

4963. Ferree, C. E., & Rand, G. Testing fitness for night flying. Speed of change of adjustment of the eyes for intensity of light and distance of object. *Amer. J. Ophthal.*, 1939, 22, 655-661.—The authors describe the application of a multiple-exposure electrical tachistoscope which is well adapted for visual testing under conditions similar to those encountered in night flying.—D. J. Shaad (Boston, Mass.).

4964. Fisher, R. A. *The design of experiments*. London: Oliver & Boyd, 1935. Pp. 251 + xi.—Different types of experimentation are considered with reference to their logical structure, to show that valid conclusions may be drawn from them without using the disputed theory of inductive inferences, i.e., of arguing from observation to explanatory theory. This is possible if a null hypothesis is explicitly formulated when the experiment is designed; this hypothesis can never be proved, but may be disproved with whatever probability one will accept as demonstrating a positive result. Chapters II, III, and IV illustrate simple applications of the principles involved in sensitivity, significance, tests of wider hypotheses, validity, and estimation and elimination of error. More elaborate structures are treated in later chapters. Chapter titles are: (V) the Latin square; (VI) factorial design in experimentation; (VII) confounding; (VIII) special cases of partial confounding; (IX) increase of precision by concomitant measurements: statistical control; (X) generalization of null hypotheses: fiducial probability; (XI) measurement of amount of information in general.—N. R. Bartlett (Brown).

4965. Forbes, M. L. H. Grooved blocks for use in registering choice. *J. genet. Psychol.*, 1939, 54, 235-236.—When each of a number of objects from which a choice is to be made is fixed to the top of a block, and the grooved under surface of the block carries rubber type, the subject can put the block in a printing frame so that it bears upon a tape, thus recording the selection made.—D. K. Spelt (Mississippi).

4966. Frank, L. K. Time perspectives. *J. soc. Phil.*, 1939, 4, 293-312.—The new space-time conception leads to the realization that structure and function are the spatial and temporal aspects of organisms. Human conduct must be explored for its temporal implications, since it is conditioned by the time perspectives of the individual and of his culture.—W. A. Varvel (Kansas).

4967. Freud, S. [Ed.] *Internationale Zeitschrift für Psychoanalyse und Imago*. (Volume 24.) London: Imago Publishing Co. Quarterly; annual subscription 34/-.—This journal, edited by Freud with the co-operation of an international staff, is the new official publication of the International Psychoanalytic Association. It is a continuation from the 23rd volumes of the *Internationale Zeitschrift für Psychoanalyse* and of *Imago*, neither of which

appeared during 1938, and in combined form will continue the traditions of both journals.—*H. Beaumont* (Kentucky).

4968. Gini, C., & Zappa, G. *Sulle proprietà delle medie potenziate e combinatorie.* (On the properties of power and combined means.) *Metron*, 1938, 13, 21-29.—Applications of a comprehensive formula for means, previously published by the first author.—*N. R. Bartlett* (Brown).

4969. Guilford, J. P. *General psychology.* New York: Van Nostrand, 1939. Pp. xii + 630. \$3.00.—This introductory text is designed for courses in liberal arts colleges. It "reverts to the more traditional, logical arrangement" of topics: Part I includes 3 introductory chapters on the content and methods of psychology, and on neural functioning; Part II, Sensory Activities, deals with the facts of perception and the sensory mechanisms in 7 chapters and some 150 pages; Part III, concerned with Motivation of Behavior (including emotional responses and attitudes), includes 5 chapters and approximately 125 pages, and is followed by Part IV, Acquiring New Adjustments, with 4 chapters on learning and remembering, comprising about 80 pages; 3 chapters with about 65 pages make up Part V, Symbolic Activity; and Part VI, Individual Differences (about 100 pages), closes the book; the last part includes chapters on the measurement and distribution of abilities and a discussion of personality. There are many illustrations, and at the end of the book there is a chapter-by-chapter citation of the literature. There are exhaustive author and subject indexes.—*L. J. Stone* (Brooklyn College).

4970. Lassen, H. *Leibniz'sche Gedanken in der Uexküll'schen Umweltlehre.* *Acta biotheor.*, 1939, 5, 41-50.—As a foundation of the "Umwelten" v. Uexküll considers Kant's idealism as the best starting point. The present essay, on the contrary, tries to demonstrate that the peculiarity of Uexküll's problems rather corresponds to the logical and metaphysical position of Leibniz's "monadology," and so shares its philosophical profundity as well as its ontological difficulties.—*H. Hassen* (Hamburg).

4971. Ledermann, W. *On a shortened method of estimation of mental factors by regression.* *Psychometrika*, 1939, 4, 109-116.—A shortened method of finding the regression for estimation of the scores on mental factors is presented. If the correlations among n tests are accounted for by r factors, the regression equation involves the inverse of an $r \times r$ matrix instead of the inverse of an $n \times n$ matrix. When r is much less than n , there is considerable saving in computational labor. A numerical example is presented to illustrate the method.—(Courtesy *Psychometrika*).

4972. Matumoto, K., Kuraishi, S., & Tuzuki, A. [On technical terms of psychology.] *Jap. J. Psychol.*, 1939, 14, 53-60.—The authors insisted upon the necessity of unification of technical terms of psychology in Japanese from the standpoint of easier mutual understanding between psychologists, of the connection of psychology with other sciences,

and of more rapid and easier propagation of the science. As their first trial 173 foreign words of importance and their Japanese equivalents were chosen from prevailing Japanese texts.—*R. Kuroda* (Keijo).

4973. Mosier, C. I. *Determining a simple structure when loadings for certain tests are known.* *Psychometrika*, 1939, 4, 149-162.—A rigorous and an approximate solution are found for the problem: Given a primary trait matrix for n tests and r_1 traits, and a matrix for the same n tests and r_2 reference axes, to discover the transformation which will transform the second matrix into the first, or primary trait matrix. Formulas for determining the limits of the effect of using the approximate solution are presented. The method is applied to a set of 20 hypothetical tests, defined by their loadings on 4 orthogonal primary traits. After factoring the intercorrelations of these variables by Thurstone's centroid method, approximating the diagonals, the original hypothetical matrix is reproduced with a root mean square discrepancy of .014 by assuming as known the primary trait loadings of only the first 8 tests. The method is applied to the results of factoring two batteries of 14 tests, having 8 tests in common, to give the factor loadings of the two batteries on the same reference axes. The method provides a means of comparing directly and quantitatively the results of two different factor studies, provided they have tests in common, and of testing the stability of simple structure under changes in the battery. The relations of the method here developed to certain problems in multiple correlation are shown.—(Courtesy *Psychometrika*).

4974. Ogawa, T., Tuzuki, A., & Yagi, B. [On technical terms in psychology.] *Jap. J. Psychol.*, 1939, 14, 97-103.—As a supplementary test for the proposition reported under the same title by Matumoto, Kuraishi, and Tuzuki, the authors further arranged English and German technical words along with their Japanese equivalents.—*R. Kuroda* (Keijo).

4975. Pastore, A. Alessandro Gatti. *Arch. Ital. Psicol.*, 1938, 16, i-iii.—Biographical data concerning Gatti, including a complete bibliography and an analysis of his research activities.—*H. Beaumont* (Kentucky).

4976. Rhine, J. B. William McDougall (1871-1938). *J. Parapsychol.*, 1938, 2, 239-241.—The contribution of McDougall to the field of parapsychology is reviewed briefly. Portrait frontispiece.—*C. E. Stuart* (Duke).

4977. Smith, B. M. *Note on a shuffling machine.* *J. Parapsychol.*, 1938, 2, 231-232.—A mechanical device to approximate a sliding hand-shuffle of cards is described and illustrated. A long narrow box, mounted on an axis in the middle and perpendicular to its long dimension, is lined at the top and bottom with sheet zinc bent in a wavy pattern. When rotated by an electric motor controlled by a rheostat, gravity and the differential friction of the cards sliding over the shallow zinc troughs allow an adequate

random shuffle. Tests of the device are reported.—*C. E. Stuart* (Duke).

4978. Snodgrass, J. M. Simplified tracings of muscle action currents. *J. gen. Psychol.*, 1939, 20, 503-504.—An integrating circuit is presented.—*C. N. Cofer* (Brown).

4979. Stokvis, B. De beteekenis der experimentele psychologie in de geneeskunde. (The significance of experimental psychology for medicine.) Lochem: Tijdstroom, 1939. Pp. 25. Fl. 0.75.—In this inaugural address as assistant professor of experimental psychology at the University of Leyden, the director of the experimental laboratory at that University discusses the history of this branch of science. Experimental psychology is of special interest in the diagnostic procedure in medicine, particularly as applied by the hygienist and internist. It bears a close relation to psychotherapeutics in aiming at a concrete understanding of the individual. The importance of test profiles and other applications of psychological diagnosis is emphasized.—*H. Beaumont* (Kentucky).

4980. Takatsuki, R. English translation of *Hsin Hsin Ming*. *Acta psychol. Keijo*, 1939, 3, 55-60.—*Hsin Hsin Ming*, the only work written by a Chinese Zen priest called Chien Chih (?-606) is translated from the Chinese original into English. *Hsin Hsin Ming* consists of 146 "verses of elegance" and has only 548 characters, each verse having four. This work may, however, be said to represent the complete Zen spirit, the essentials of Buddhism, and therefore it has been very widely read and appreciated in Japan, Korea, and China.—*R. Kuroda* (Keijo).

4981. Taylor, D. The development of the conception of mind. *Aust. J. Psychol. Phil.*, 1939, 17, 26-39.—Descartes led the whole empiricist tradition into error by identifying subject and object through the doctrine of innate ideas. Resulting epistemologies have thus been unsatisfactory, and are vulnerable to positivistic and realistic criticism. The difficulty has consisted largely in acceptance of the idea as the epistemological unit. The nature of mentality must rather be sought in rationality, which with its emphasis on the reason of activities is the basic property of mind.—*H. D. Spoerl* (American International College).

4982. Tippett, L. H. C. The methods of statistics; an introduction mainly for experimentalists. (2nd ed.) London: Williams & Norgate, 1937. Pp. 280. 15/-.

4983. Venturi, A., Sacerdote, A., & Marzi, A. Alessandro Gatti al Centro di Studi del Lavoro. (Alessandro Gatti at the Center for Labor Study.) *Arch. Ital. Psicol.*, 1938, 16, iv-viii.—Three tributes to Gatti's work as director of the Center for Labor Study in Turin. Portrait.—*H. Beaumont* (Kentucky).

4984. Wagner, R., & Deckner, S. Ein einfaches Verfahren, um einer grösseren Zahl von Beobachtern Projektionsbilder stereoskopisch für unbewaff-

nete Augen darzustellen. (A simple procedure for the presentation of stereoscopic projection images to a number of spectators not provided with stereoscopic apparatus.) *Z. Biol.*, 1937, 98, 261-272.—A grill placed before the projection screen reveals certain bands of the image to one eye, at the same time hiding them from the other, and vice versa. An image composed of bands alternately printed with two stereoscopic images is thus broken down into its two original parts. The effect is produced only for a certain determined distance between the spectator and the screen, but this distance is the same for all spectators placed in a plane parallel to the screen. A simple procedure for the manufacture of the special apparatus required is presented briefly.—(Courtesy *Année psychol.*).

4985. White, M. G. Probability and confirmation. *J. Phil.*, 1939, 36, 323-328.—The relative frequency analysis of probabilities is closely involved in the question of the degree of confirmation of the empirical sentence upon which the probabilities are based.—*J. G. Miller* (Harvard).

4986. Whitehead, A. N. Modes of thought. New York: Macmillan, 1939. Pp. viii + 241. \$2.50.—Under the heading "Creative Impulse" the author discusses the notions of importance (as contrasted with matters of fact), of expression, and of understanding; and under the heading of "Activity," the notions of perspective, of process and forms of process, and of the universe as justifying the ideals characteristic of civilization. Then follow two chapters on "Nature Lifeless" and "Nature Alive," and an epilogue on the aim of philosophy. The declared aim of the book is "to examine some of those general characterizations of our experience which are presupposed in the directed activities of mankind." The discussion throughout is of the speculative kind and is carried on in broad terms.—*C. J. Ducasse* (Brown).

4987. Wilson, E. B., & Worcester, J. Note on factor analysis. *Psychometrika*, 1939, 4, 133-148.—Certain assumptions and procedures basic to factor analysis are examined from the point of view of the mathematician. It is demonstrated that the Hotelling method does not yield meaningful traits, and an example from the theory of gas mixtures with convertible components is cited as evidence. The justification of current methods for determining the adequacy of the reproduction of a correlation matrix by a factorial matrix is questioned, and a χ^2 criterion, practical only for a small matrix, is proposed. By means of a hypothetical example from geometry, it is shown that results of a Hotelling analysis are necessarily relative to the population at hand. The factorial effects of the adjunction of a "total test" to a group of tests are considered. Some of the general considerations and questions raised are pertinent to types of analysis other than the Hotelling.—(Courtesy *Psychometrika*).

4988. Yamanouchi, T. *Dōbutsu shinrigaku*. (Animal psychology.) Tokyo: Yōkendō, 1938. Pp. xxiii + 231. ¥ 3.30.—*R. Kuroda* (Keijo).

4989. Yule, G. U., & Kendall, M. G. **An introduction to the theory of statistics.** (11th ed.) London: Charles Griffin, 1937. Pp. xiii + 570. 21/-.

[See also abstracts 5098, 5115, 5286.]

NERVOUS SYSTEM

4990. Brickner, R. M. **Factors in the neural bases of intellect and emotion.** *Yale J. Biol. Med.*, 1939, 11, 547-556.—From the data of uni- and bilateral lobectomies, hemispherectomies and other clinical findings, hypotheses regarding the neural bases of intellect and emotion are made. The neuro-intellectual system is represented bilaterally in the brain with the more frontal portions accomplishing increasingly complex thought syntheses. The neuro-intellectual system resembles the neuro-muscular and neuro-sensor systems, but our comprehension of it is made difficult since no observable end-organ is associated with the system. Emotion is conceived as being composed of the combination of thalamic feeling-tone impulses and cortical intellect impulses. Cases of epilepsy are cited in which the seizures activate the neurones of intellect or the neurones of feeling-tone separately.—A. Chapanis (Yale).

4991. Brown, G. L. **Neuromuscular and ganglionic transmission by acetylcholine.** *Proc. roy. Soc.*, 1937, B123, 406-409.

4992. Cutts, K. K., & Jasper, H. H. **Effect of benzedrine sulfate on behavior-problem children with abnormal electro-encephalograms.** *Arch. Neurol. Psychiat.*, Chicago, 1939, 41, 1138-1145.—These investigators conclude that the administration of benzedrine sulfate and phenobarbital to 12 behavior-problem children with abnormal electro-encephalograms shows no definite correlation with changes in the electro-encephalogram in relation to clinical changes produced by these drugs. Phenobarbital is definitely contra-indicated in the treatment of these children. About half of these children showed marked improvement in behavior with benzedrine sulfate therapy, accompanied by a prominent 6-cycle rhythm in the electro-encephalogram.—W. Marshall (Appleton Clinic, Wis.).

4993. Freeman, W., & Watts, J. W. **An interpretation of the functions of the frontal lobe.** *Yale J. Biol. Med.*, 1939, 11, 527-539.—"From a study of 48 cases of pre-frontal lobotomy the conclusion is reached that the frontal lobes are concerned with the projection of the individual-as-a-whole into the future, with the formation of an image of the individual-as-he-is-becoming. The other suggested functions appear to be mechanisms by which this is attained. Many of the symptoms of frontal lobe disease can be explained upon the basis that the individual has lost his self-critique, is more easily satisfied, is lacking in 'social sense,' has had an impairment of his imagination as related to himself. The frontal lobes are not centers of intelligence nor of emotion, nor are they directly concerned with the energy drive of the individual. They assemble the available data, synthesize them, plan a course of

action with the ideal in mind, and, equipped with energy of response and with appropriate affective tone, project the individual into the future, direct him toward his goal—and criticize his shortcomings."—A. Chapanis (Yale).

4994. Harlow, H. F. **Recovery of pattern discrimination in monkeys following unilateral occipital lobectomy.** *J. comp. Psychol.*, 1939, 27, 467-489.—After being placed in darkness for 10 days following the operation, 4 rhesus monkeys exhibited markedly decreased ability to solve 7 patterned string problems which did not cause them difficulty after 10 days in darkness prior to the operation. These results are said to indicate absence of spontaneous cortical reorganization of such a nature as to allow correct discrimination. All monkeys eventually relearned the discriminations. New habits of fixation were utilized. "A considerable degree of specificity occurs in the process of recovery. Reorganization of the visual field following practice in one situation does not guarantee appropriate behavior in similar situations. Once reorganization . . . is established the responses to the tests of pattern discrimination are efficient, stable, and permanent." Bibliography.—N. L. Munn (Vanderbilt).

4995. Marrazzi, A. S. **Electrical studies on the pharmacology of autonomic synapses. I. The action of parasympathomimetic drugs on sympathetic ganglia.** *J. Pharmacol.*, 1939, 65, 18-35.

4996. Muralt, A. v. **Transmission of excitation in living matter. Observations on chemical wave transmission in excited nerve.** *Proc. roy. Soc.*, 1937, B123, 399-403.

4997. Ranson, S. W. **The anatomy of the nervous system.** (6th ed.) Philadelphia: Saunders, 1939. Pp. 507. \$6.50.—This edition is revised but not enlarged. Recent work has made possible a more accurate account of the connections with the cortex of the various thalamic nuclei and of the parts of the thalamus within which the brachium conjunctivum, medial lemniscus, spinothalamic tract, and secondary trigeminal tracts end. Several new plates have been added, so that the book now contains 382 illustrations, some of them in colors. The chapters remain unchanged. The bibliography has grown to 12 pages.—J. McV. Hunt (Brown).

4998. Smith, K. U. **The behavior of decorticate guinea pigs.** *J. comp. Psychol.*, 1939, 27, 433-447.—The responses of 11 guinea pigs which survived bilateral ablation of the cortex were observed over a period of from 2 to 16 days. The animals were then killed and their brains preserved. Photographs of these and a normal brain from three positions are reproduced in this paper. The chief changes in behavior following decortication were: increased activity, which was more exaggerated in those animals from which the cortex had been removed in one operation rather than in stages; inability to masticate adequately, which possibly underlies a decline in health; excessive grooming; loss of the rumbling vocalization found in normal animals;

somewhat more readily elicited startle pattern; absence of tonic rigidity and reflex immobility; hyperexcitability to tactal stimuli; visual defect, which led animals to walk off an elevated surface; and a suggestion of impaired restraint over some emotional responses. Certain unlearned optokinetic responses as well as reactions to auditory stimuli were retained. Bibliography.—N. L. Munn (Vanderbilt).

4999. Wechsler, I. S. A textbook of clinical neurology, with an introduction to the history of neurology. (4th ed.) Philadelphia: Saunders, 1939. Pp. 844. \$7.00.—After an account of methods of examination, the author treats the spinal cord, peripheral nerves, and the brain. Part 5, 64 pages, covers the neuroses. 40 pages are given to the history of neurology.—W. S. Hunter (Brown).

5000. Wiersma, C. A. G., & Van Harreveld, A. A comparative study of the double motor innervation in marine crustaceans. *J. exp. Biol.*, 1938, 15, 18-31.—This paper reports investigations, by means of mechanograms and recorded action currents, of the double motor innervation in the claw adductors of the marine crustaceans *Randallia ornata* and *Blepharipoda occidentalis* and the adductor of the walking leg of the crustacean *Cancer anthonyi*. In all three of these animals the muscles specified have two motor axons, one thicker than the other. Stimulation of the thick fiber causes a "fast" response in most though not all instances. In *Randallia* and *Blepharipoda* the slow contraction was higher than the fast with frequencies of less than about 50 per second, in *Cancer* with frequencies less than 100 per second. Action currents of both kinds of contraction show facilitation, but under the same conditions of stimulation the fast action currents are higher. With the thick fiber the first stimulus causes a definite action-current top, while the action currents of the slow contraction appear only after several stimuli. The action currents are higher in the thick fiber even when the resulting mechanical action is smaller than occurs with similar stimulation of the thin fiber. Other differences in the functioning of the two axons are described. 10 references.—C. K. Trueblood (Harvard).

5001. Young, J. Z. The functioning of the giant nerve fibers of the squid. *J. exp. Biol.*, 1938, 15, 170-186.—This paper reports investigations of the functioning of the giant nerve fibers of the squid (*Loligo pealii* Leseuer) by means of nerve-muscle preparations cut from the mantle of the animal and maintainable for half an hour in a sea-water medium. The nerve was stimulated by single condenser discharges through chlorided silver electrodes placed under the nerve. Muscle contractions were recorded by means of isotonic and semi-isometric levers, recording on a smoked drum. As a result of the experiments described it is concluded that the single giant nerve fibers in the stellar nerves of the squid are motor axons which produce contraction of the circular fibers of the mantle muscles. For reasons given in detail these axons are considered to con-

stitute, with the muscle fibers which they innervate, single motor units comparable with those into which the vertebrate muscular system is divided. Stimulation of the smaller fibers in a stellar nerve after destruction of the giant fiber also causes contraction of the circular muscles of the mantle. The amount of the contraction increases progressively with increased voltage, presumably on account of the stimulation of more and more nerve fibers. The maximum tension developed in this way, however, is always much less than that produced by stimulation of the giant fibers. 21 references.—C. K. Trueblood (Harvard).

[See also abstracts 5034, 5068, 5199, 5266, 5429.]

RECEPTIVE AND PERCEPTUAL PROCESSES

5002. Alonso, J. M., & Chiarino, A. Otosclérose ou otospongiosis: influence exercée par la parathyroïdectomie sur l'audition. (Otosclerosis or otospongiosis: influence of parathyroidectomy on hearing.) *Acta otalaryng.*, Stockh., 1939, 27, 123-125.—The authors present the results which they have obtained so far by means of parathyroidectomy and allied procedures in 19 cases of otosclerosis. The almost regular subsequent improvement in ability to hear the human voice was more pronounced in cases in which the intervention consisted of extirpation of one of the parathyroid glands than in cases in which there had been merely ligature of the branches of the inferior thyroid artery. There was almost always a high blood calcium count. This often diminished after the operation. The post-operative improvement in hearing was followed by a diminution, but the hearing generally remained above its original level. The improvement in hearing of the voice was more pronounced in young subjects than in older ones.—E. M. Pilpel (New York City).

5003. Aschoff, —, & Bayer, —. Beitrag zur Frage der physikalischen Grundlagen der zur Hörprüfung benutzten tiefen Stimmgabeln, Monochorde und Lärmtrömmeln. (A contribution to the question of the physical characteristics of tuning forks, monochords, and sound drums used in testing audition.) *Z. Hals-Nas.-u. Ohrenheilk.*, 1939, 45, 77-85.—The number and intensity of partial tones heard immediately after the fundamental increase as the vibration frequency of the tuning fork is lower; thus it is possible to obtain auditory reactions with a fork whose frequency is considerably below the subject's auditory threshold. The frequency of monochord tones agrees rather well with the assigned values, but tonal intensity depends upon the direction of the stroke. Considerable variation exists in sound drums in respect to intensity of tone and distribution of partials.—P. L. Krieger (Leipzig).

5004. Batenko, P. M., & Belostozki, E. M. [The effect of altitude on the blind spot.] *Vestn. Ofsl.*, 1938, 13, 816.—Blind spots enlarged at high altitudes return to normal after inhalations of oxygen, indicating that the etiologic factor is anoxemia.—D. J. Shaad (Boston, Mass.).

5005. Békésy, G. v. Über die piezoelektrische Messung der absoluten Hörschwelle bei Knochenleitung. (Piezo-electric measurement of the absolute auditory threshold in bone conduction.) *Akust. Z.*, 1939, 4, 113-125.—The problem was the measurement of the vibration of the bones of the skull through the soft and variable skin. It was found that the entire range of sound waves is transmitted through the skin to the bone almost without distortion. The oscillatory pressure on the bone is consequently well adapted for purpose of measurement. Piezo-electric pressure cells were prepared which were insensitive to their own movements and hence could be superimposed on the vibrating body of an electrodynamic system, where they recorded only the surface pressure. The threshold throughout the entire auditory range of the normal and radically operated ear was determined by this method. The fact was also verified that the tuning fork is perfectly adapted not only for air but also for bone conduction.—P. L. Krieger (Leipzig).

5006. Berens, C., & Loutfellah, M. Aniseikonia; a study of 836 patients examined with the ophthalmodynamometer. *Amer. J. Ophthal.*, 1939, 22, 625-642. A brief review of the history of aniseikonia is followed by a summary of case studies in which size differences in retinal images were measured. Data indicate that aniseikonia may be a factor in some cases of ocular complaints unrelieved by the wearing of ordinary correcting lenses.—D. J. Shaad (Boston, Mass.).

5007. Bissar, A. Über den laugigen Geschmack. (The puckery taste.) Berlin: F. Linke, 1939. Pp. 23.

5008. Bönig, H. Untersuchungen über vergleichende Erkennungswerte der gebräuchlichsten Optotypen und die optimale Beleuchtung bei der Bestimmung der Sehschärfe. (Studies on the comparative recognition values of the most useful optotypes and the optimal illumination for the determination of visual acuity.) Bonn: Trapp, 1939. Pp. 30.

5009. Bujas, Z. Kontrast- und Hemmungsscheinungen bei disparaten simultanen Geschmackreizen. (Contrast and inhibition phenomena in the case of disparate, simultaneous taste stimuli.) *Industr. Psychotech.*, 1939, 16, 81-89.—Determinations with three subjects show that the lower intensities of sweet raise the sensitivity of the tongue to simultaneously presented salt solutions, but that the higher intensities of sweet decrease its sensitivity to salt. The curve for contrast is U-shaped. The curve for inhibition shows a logarithmic rise for stimulation of separate spots, and a linear increase for stimulation of identical spots. When the accessory stimulus is of the same quality as the experimental stimulus, an inhibitory effect is observed. Adaptation of neighboring areas to a stimulus of the same quality produces inhibitory effects on the threshold. Adaptation of a spot to sweet, on the other hand, produces a contrast effect for later stimulation with salt. Quantitative data are shown

for three subjects under each of the four major conditions discussed.—J. G. Jenkins (Maryland).

5010. Chard, R. D. Visual acuity in the pigeon. *J. exp. Psychol.*, 1939, 24, 588-608.—In an experiment designed to measure minimum separable acuity of pigeons under various conditions of accommodation it was found that acuity is poorer at 30 cm than at greater distances. Results obtained from four birds tested at various accommodation distances gave the following results when jumping distance was kept at 40 cm or less: 30 cm, 3.3-7.8 min; 40 cm, 2.7-5.2 min; 60 cm, 3.3-4.2 min; 100 cm, 3.2-3.5 min. Increase in jumping distance tends to produce an increase in threshold. Differences in acuity thresholds at various accommodation distances are not great in relation to individual differences and chance errors. Nevertheless, it seems likely that the near-point of accommodation has been approached or even passed at 40 cm.—H. W. Karn (Pittsburgh).

5011. Christian, P. Experimentelle Untersuchung über die Abhängigkeit der Pupillenreaktion von Intensität, Ausdehnung und Dauer des Lichtreizes in normalen und pathologischen Zuständen. (An experimental study on the dependence of the pupillary reaction on the intensity, extensity, and duration of the light stimulus, in normal and pathological conditions.) Heidelberg: Brausdruck, 1939. Pp. 22.

5012. Ciocco, A., Hughson, W., & Palmer, C. Studies on pupils of the Pennsylvania School for the Deaf. 2. Resemblances in the auditory acuity of siblings. *Hum. Biol.*, 1939, 11, 259-268.—The analysis of the difference in acuity of 40 pairs of siblings and 40 pairs of unrelated children shows a significantly less degree between siblings than between non-siblings.—O. W. Richards (Spencer Lens Company).

5013. Costa, A. Ricerca preliminare sulle modificazioni di rappresentazioni visive nel tempo. (Preliminary researches on the modification of visual images after successive intervals of time.) *Arch. Ital. Psicol.*, 1938, 16, 1-15.—Two geometrical drawings were used in this experiment. One, in black and white, was shown to 4 subjects; the second, in 4 colors, to 4 others, and both were shown to 6 other subjects. Observers were asked to reproduce the figures once a day for 15 days. 202 reproductions were obtained, which could be classified into three groups: similar in shape, but differing in size; simplifications; and more complex than the original. Simplification, as shown in the reproductions and indicated by information volunteered by the subjects, is partly due to a conscious desire to simplify in order to remember better. These modifications present further evidence of the dynamic character of mental life.—H. Beaumont (Kentucky).

5014. Embacher, E. M. Vergleichende Lichtsinnsprüfungen mit Skotoptikometer und Adapto-meter. (Comparative light discrimination facts with the scotopticometer and the adaptometer.) Eisfeld i. Thür.: Beck, 1938. Pp. 25.

5015. Essen, J. v. Die Erscheinungsweise der Stille. (The phenomenal appearance of silence.) *Msch. Ohrenheilk.*, 1939, 73, 175-190.—On the sensory side, silence is aphonic and consists in absence of sound and noise. It is either experienced (and may lead to a silence phobia in psychasthenic persons) or perceived, in which case it has a sensory quality diametrically opposed to sound and noise rather than being a low-intensity sound. The possibility of perceiving sound and silence is dependent on this very polarity between the two.—*P. L. Krieger* (Leipzig).

5016. Farkas, B. Zur Kenntnis des Baues und der Funktion des Saccolithen der Knochenfische. (A contribution to an understanding of the structure and function of the saccolith in bony fishes.) *Zool. Anz.*, 1938, Suppl. Bd. 11, 193-206.—The histological features of the saccus of minnows indicate that it does not participate in the auditory process.—*P. L. Krieger* (Leipzig).

5017. Favilli, M. La percezione del tempo nell'ebbrezza mescalinica. (The perception of time in mescal intoxication.) *Rass. Studi psichiat.*, 1937, 26, 455-462.—In previous studies on mescal intoxication with Heymann, the author was struck by the modifications in time perception observed: estimates of time were extraordinarily short; for example, a period of 45 min. was estimated as 15 min. On the other hand, there are reports that a euphoric phase lasted an extremely long time, "an eternity," according to some subjects. At one time in the course of an intoxication there appears an impression of extreme slowness, at another one of excessive rapidity; and after an impression of extremely long duration for successive events, the total duration is judged as much shorter than it actually is. The explanation suggested is that in the intoxicated state, the shortening of the "field of consciousness" results in a sort of contemplation of the present instant which lacks a frame of reference. Thus the apparent duration of these instants taken by themselves is increased. But durations composed of a large number of these dimensionless points is, by the same token, underestimated. Furthermore, the function of the real is diminished, and there exists a constant feeling of novelty and an impression of boredom, with euphoric phases. All these factors exercise various effects on the appreciation of time.—(Courtesy *Année psychol.*).

5018. Feinblom, W. A quantitative study of the visual after-image. *Arch. Psychol., N. Y.*, 1938, No. 233. Pp. 46.—A study was made of the relation of the visual after-image to the intensity, time of exposure, color of stimulus, and state of adaptation of the eye. A simple experimental procedure is described in which care is taken to insure (1) that constant light adaptation is obtained at each beginning of time in the dark; (2) that eye movement during exposure of the stimulus is reduced to a minimum by limiting the exposure periods to not more than 1.0 second; (3) that during the observation of the after-image complete darkness serves as

a background. The duration of the visual after-image is a function of the time in the dark, of time of exposure of the stimulus, of intensity of the stimulus, and of "color" of the stimulus.—*E. M. Achilles* (Columbia).

5019. Friedrich, W. Über den Amplitudenunterschied beim Augenzittern der Bergleute. (On the differences in amplitude in miners' nystagmus.) *Bottrop i. W.: Postberg*, 1939. Pp. 29.

5020. Goebel, O. Elektrokinese und Hörempfindung. (Electrokinesis and auditory sensations.) *Msch. Ohrenheilk.*, 1939, 73, 279-286.—Radio current does not cause auditory sensation by changing the form of the auditory cells; its effect can be due only to immediate stimulation of the nerve fibers. With stimulation by an alternating current capable of producing sound, the resulting auditory sensation is based on mechanical displacements in the labyrinth.—*P. L. Krieger* (Leipzig).

5021. Gordon, R. D. Some preliminary postulates on stimulus-perception, and consequent probability distributions for behavior. *Psychometrika*, 1939, 4, 89-98.—A stimulus (or stimulus-complex) is pictured as giving rise to a random series of sensory nerve "pulses," which manifest themselves in contractions of individual muscle fibers. Assuming the expected time-frequency of these pulses to be proportional to the intensity of the stimulus, probability distributions are computed representing the cumulative effect of these pulses on the state of the organism, that is, on its degree of awareness of the stimulus. Preliminary results suggest a modification of the Weber-Fechner formula for intensity discrimination for certain types of stimuli: the psychological scale to be measured by $I^{1/2}$ instead of $\log I$.—(Courtesy *Psychometrika*).

5022. Graham, C. H., & Bartlett, N. R. The relation of size of stimulus and intensity in the human eye: II. Intensity thresholds for red and violet light. *J. exp. Psychol.*, 1939, 24, 574-587.—Intensity thresholds were determined for red and violet light as a function of the area of the stimulating surface for the periphery of the eye. Measurements with red light were made on the fovea. Results show that the thresholds for both fovea and periphery follow a typical course with an increase in area. The threshold is high for small areas and decreases as area increases, until with larger areas it approaches a final, limiting value. The curves obtained on the periphery for red and violet are parallel along the log-threshold axis. This means that no cones are involved with either type of stimulation. The results are described by an hypothesis developed in an earlier paper and by one which considers the photochemical activity of the single retinal receptive unit.—*H. W. Karn* (Pittsburgh).

5023. Graham, C. H., Brown, R. H., & Mote, F. A., Jr. The relation of size of stimulus and intensity in the human eye: I. Intensity thresholds for white light. *J. exp. Psychol.*, 1939, 24, 555-573.—Evidence is presented which shows that intensity thresholds follow a typical course with an increase

in area in both the periphery and fovea of the eye. In both regions the threshold is high for small areas. As area increases, the threshold decreases, until with large areas it approaches a limiting value. In the fovea, the decrease of threshold with increase in area occurs within the confines of a stimulus diameter of 1° . In the periphery, the final level is nearly attained at a diameter of 10° . A quantitative account of the area-intensity relation is given which describes the data over the total range of foveal area. In the periphery, the formulation holds for areas having diameters greater than $20'$. A number of factors which may arise below this limiting diameter of $20'$ are discussed.—H. W. Karn (Pittsburgh).

5024. Güttich, A. Ohr und Gehirn. (Ear and brain.) *Zbl. ges. Neurol. Psychiat.*, 1939, 91, 605-606.—All the newer clinical experience is evaluated from the standpoints of sensory physiology.—P. L. Krieger (Leipzig).

5025. Hahn, H., Kuckulies, G., & Taeger, H. Eine systematische Untersuchung der Geschmackschwelten. (A systematic investigation of the taste limens.) *Z. Sinnesphysiol.*, 1938, 67, 259-306.—By means of a procedure (previously described by the authors) which permits control of such variables as the exact locus of stimulation, the temperature, the concentration of the gustatory stimuli, and the rate of secretion of saliva, the problem of the physicochemical basis of taste was investigated. At liminal concentrations it was found that the adequate stimulus, in general, for salt taste was the anion, for sweet taste beryllium salts and certain alkaloids, for bitter taste the cation, and for sour taste the dissociated H-ion. The taste reactions showed no similarity to adsorption processes or electrical phenomena, but rather to the process characteristic of differential ion penetration of cell walls. Organic and non-electrolytic taste-stimulating substances are also discussed.—G. F. J. Lehner (Vermont).

5026. Harms, H. Ort und Wesen der Bildhemmung bei Schielenden. (Place and nature of image suppression in squint.) *v. Graefes Arch. Ophthalm.*, 1937, 138, 149-209.—A central scotoma in the deviating eye of squinters was demonstrated by a method of observing the pupillo-motor response to illumination in various parts of the visual field. Image suppression was found in all cases of squint. In cases of normal correspondence suppression was most intense and involved all parts of the retina of the squinting eye. In cases of abnormal projection, suppression was only regional, but was present in both eyes. As a basis of central suppression the author infers a "sensorial central-fusion center," where the impressions of the two eyes are normally integrated, and depth perception due to stimulation of disparate retinal points is realized. This center he supposes to be the end-member of the sensorial visual pathway, and to be located above the visual cortex. Since the peculiarities of vision in squinters (i.e. amblyopia and abnormal projection) are shown to be merely adaptation processes to the

position of the eyes, these cannot be regarded as the cause of squint. The cause should be sought, not in the sensorial part of the visual pathway, but in the centrifugal fibers which carry the suppression impulse from the "central-fusion center."—D. A. Franklin (Los Angeles).

5027. Harsh, C. M., Beebe-Center, J. G., & Beebe-Center, R. Further evidence regarding preferential judgment of polygonal forms. *J. Psychol.*, 1939, 7, 343-350.—By the factor analysis of observers' judgments of 26 of Birkhoff's forms (used in his book *Aesthetic Measure*), four independent, common factors in preferential judgment of polygonal forms were isolated: (1) liking for smoothness of contour, (2) simplicity (strongly represented in Birkhoff's formula), (3) symmetry (moderately represented in Birkhoff's formula), and (4) liking for odd points, or tall, upward-reaching figures. These findings suggest the need for changes in the present formula in order to take into account all four judgmental factors.—J. McV. Hunt (Brown).

5028. Hattingberg, I. v., & Buchholz, F. Untersuchungen über die Ermüdbarkeit des Dunkelsehens an Gesunden und Kranken. (Studies of the fatigability of dark vision in normal and abnormal subjects.) *Zbl. ges. Neurol. Psychiat.*, 1938, 87, 710.—The author used a Piper adaptometer before which he exposed Landolt's rings. At 3-second intervals these rings were changed and the intensity of illumination varied according to the subject's ability to identify the location of the break in the ring. Normal subjects showed variations amounting to approximately twice the value of the lower threshold, seemingly caused by flicker phenomena and after-images. Persons with nervous disorders showed variations amounting to from 6 to 25 times the lower threshold, indicating general fatigue of the visual apparatus. Thresholds did not increase gradually, but there was considerable fluctuation, due to the fact that in dark vision no fixation with the fovea centralis occurs, but observation takes place through peripheral parts of the retina.—P. L. Krieger (Leipzig).

5029. Heinsius, E. Die "einfache unkomplizierte" Form der angeborenen totalen Farbenblindheit. (The "simple uncomplicated" form of congenital total color blindness.) *Klin. Mbl. Augenheilk.*, 1938, 101, 489-494.—The site of this condition is not the retina but a higher sensory center.—P. L. Krieger (Leipzig).

5030. Heiser, F. A test of the Alrutz theory of the "hot" sensation. *J. gen. Psychol.*, 1939, 20, 431-447.—This theory holds that "heat" is due to simultaneous stimulation of cold and warmth spots. 50 places on the skin of 2 subjects were explored with 100 stimulations each, a stimulus of 22° C. being used. Areas which were cold-anesthetic were re-explored with a 47° C. stimulus. "A normal number of 'hot' responses were given." It is concluded that cold spot stimulation is not necessary for the report of "hot," that sensitivity to warmth is necessary for this report, and that the Alrutz theory is un-

tenable. Some interpretative comments are offered.
—C. N. Cofer (Brown).

5031. Isii, O. [An experimental study on auditory localization.] *Jap. J. Psychol.*, 1939, 14, 43-48.—An important factor in auditory localization is said to be the difference of hearing between the ears, that is, the temporal difference between the stimuli which reach the ears; this study was made to criticize this "temporal hypothesis" in some special situations. First, a locus in which the spatial difference between the ears was definite was put on a plane, and the sound produced at that locus was investigated as to whether it was heard in the appropriate direction or not. The sounds of a flute and of the human voice were used as the sources; two apparatuses, each connected with one ear of hard-of-hearing subjects by means of rubber tubes of equal lengths, were placed 10, 20, 25, or 30 cm. from each other, with the sound source constantly in the center of these apparatuses. The change of direction was observed even under these experimental conditions; and so far as these conditions can be proved appropriate the "temporal hypothesis," founded only on the temporal difference between the arrivals of the two stimuli, can be said to be incomplete.—R. Kuroda (Keijo).

5032. Jackson, E. Subjective study of visual aberrations. *Amer. J. Ophthal.*, 1939, 22, 384-389.—Observation of a bright star, street light, or automobile headlight, under proper conditions, may reveal, subjectively, minute lenticular opacities or aberrations caused by reflections from the substance of the crystalline lens.—D. J. Shaad (Boston, Mass.).

5033. Karbowski, M. Phänomenologie des Farbensehens. II. Nachbilder. (Phenomenology of color vision. II. After-images.) *v. Graefes Arch. Ophthalm.*, 1938, 138, 337-350.—The cone platelets of the retina are changed by the incidence of the light stimulus. Contrast and irradiation phenomena are observed as the tangential cells strive to discharge the cones which have been affected. If these two processes are not sufficient to effect the discharge, and the latter persists after the cessation of the stimulus, after-images are seen, positive and negative alternately until the discharge is complete. The optimum conditions for formation of positive after-images are high intensity of stimulus and short exposure, for formation of negative after-images low intensity of stimulus and long exposure.—D. A. Franklin (Los Angeles).

5034. Kennedy, J. L. The effects of complete and partial occipital lobectomy upon the thresholds of visual real movement discrimination in the cat. *J. genet. Psychol.*, 1939, 54, 119-149.—Absolute and relative thresholds for visual movement discrimination were secured for 10 normal cats. Partial bilateral occipital lobectomies on 3 cats significantly impaired performance. Complete bilateral removal of the occipital lobes in 7 cats, complicated in 1 case by lesions in the superior colliculi, interfered so markedly with performance that absolute threshold determination was possible only for 2 animals and

with brightness patterns less complex than those used pre-operatively. Postoperative relative thresholds were not secured, but 5 animals were able to discriminate a moving luminous pattern from a black screen. Results are discussed in relation to some theories of cortical function.—D. K. Spelt (Mississippi).

5035. Kleint, H. Versuche über die Wahrnehmung. III. Lage und Grösse. (Investigations on perception. III. Position and size.) *Z. Psychol.*, 1938, 143, 299-316.—The author considers the various factors which influence the perception of position and size of an object. Convergence, accommodation, and eye movements, as well as muscular tonus of both the visual apparatus and the body generally, are important.—G. F. J. Lehner (Vermont).

5036. Kuroda, R. [On sound localization in a monkey.] *Acta psychol. Keijo*, 1939, 3, 74-85.—2 or 5 boxes, similar in external appearance, in one of which was a cage holding a child monkey, were placed outdoors on a semicircumference 30 meters in radius, and the mother monkey was started from the center of the circle to seek her child by its cry. Her sound localization was nearly as accurate as that of man, though her course tended to curve toward the right, probably due to differential binaural function. With decrease of incentive her ability to localize the sounds became less accurate. English summary.—R. Kuroda (Keijo).

5037. Laird, D. A. The effect of smoking on taste preferences. *Med. Rec., N. Y.*, 1939, 149, 404.—Five preparations of pineapple juice, uniformly separated as to taste, and differing only in sweet-tartness, were tested systematically by 150 persons, divided equally between the sexes and equally among the age groups 12-18, 20-40, and 50-68; the two older groups were equally divided between smokers and non-smokers. There was found to be a preference for tartness increasing with age, and hastened definitely only in the case of women smokers.—M. H. Erickson (Eloise Hospital).

5038. Litinskii, G. A. [The rapidity of depth perception.] *Vestn. Oftal.*, 1938, 13, 850.—Data from 100 subjects indicate that rapidity of depth perception parallels acuity of depth perception, and that in orthophoria depth perception is no more rapid than in heterophoria.—D. J. Shaad (Boston, Mass.).

5039. Luckiesh, M., & Moss, F. K. Frequency of blinking as a clinical criterion of ease of seeing. *Amer. J. Ophthal.*, 1939, 22, 616-622.—Data are presented demonstrating that frequency of blinking is correlated with the duration and severity of the visual task; increased frequency of blinking during 5-minute reading periods, for which 30 subjects wore convex or concave spheres ($\frac{1}{2}$ diopter) in addition to their usual optical correction, shows that this criterion might be used in indicating the proper refraction upon the basis of comfort in seeing.—D. J. Shaad (Boston, Mass.).

5040. Manabe, H. [On the relation between the brightness and position of a light in the visual field.]

Jap. J. Psychol., 1939, 14, 1-8.—The object of this study is to determine how light stimuli change their brightness in different situations in the visual field; 5 psychologists were used as subjects in a dark room. The intensity of the stimuli was $0.0224c/cm^2$; they were circles, 4 mm. in diameter, on a perimeter; the time of exposure was 2.5 sec., the time of rest after exposure 2 min., and the time for dark adaptation before experimentation 5 min. Compared with a stimulus in the center of the visual field, one 10° from it appears either brighter or equally bright, and one over 20° from it appears comparatively dark. Stimuli within 10° of the center of the visual field have almost the same color, but those outside the 20° zone gradually increase their whiteness. Perception of form in the blind spot is very poor. When two stimuli are presented at the same distance from the fixation point, one above and the other below it, the latter appears much brighter; no pronounced difference is seen between stimuli presented on the left and those on the right of each monocular visual field; the longer the distance between two stimuli of the same brightness, the more difficult is their discrimination.—*R. Kuroda* (Keijo).

5041. Manabe, H. [On the after-image and position of a light in the visual field.] *Jap. J. Psychol.*, 1939, 14, 104-106.—Observing the inconveniences and faults of tin hand lamps of the Mitsubishi type generally used in mines, the author offers an improvement. The flame of a Mitsubishi lamp was presented in a dark room for 5 sec. at 7 different positions of the same height as the subject's eyes; these positions were 30° , 60° , and 90° to the right and left of the center. The distance between the subject and the light was 1 m. The duration, color, process, and movement of the after-image in all cases were measured or described. From the results it was concluded that the lamp must be placed over 30° from the center of the visual field, for the temporal duration of the after-images which cause inconvenience for miners is longest at the center. By adding a tin plate at the base of the flame dizziness and after-images are removed and flickering of the flame in the wind is lessened.—*R. Kuroda* (Keijo).

5042. Martin, H. G. The practical measurement of accommodation and convergence. *Amer. J. Ophthal.*, 1939, 22, 406-413.—An outline of tests based on the use of an instrument described in this journal, 1938, 21, 161.—*D. J. Shaad* (Boston, Mass.).

5043. Merker, E. Die physiologische Leistung des Fischauge in kurzwelligem Licht. (The physiological capacity of the fish eye in short-wave light.) *Zool. Jb.*, Abt. 3, 1939, 59, 391-428.—The shark's eye is the most sensitive to ultraviolet light. Merker demonstrated the movement of the pigment to the rods and cones to wave lengths beyond violet, and in fact to wave lengths of 313μ , the effect of which on the retina is still demonstrable. In weak ultraviolet light the effect on the cones is not so clearly marked. Retinal currents under the in-

fluence of short-wave light could not be definitely proved in the shark's eye, although they could be in the frog. Strong filtered light of 366μ was perceived by sharks as such filtered light. In the ultraviolet rays they snapped at food with precision. In the light of a monochromator the results of such experiments were not so clear, as sharks also snapped at food in the light of wave lengths below $313-353\mu$, i.e., they snapped at fluorescent shadows. This retinomotor experiment refutes Hertel's view that fluorescent light affects the fish and frog eye only in a wave length of 330μ .—*P. L. Krieger* (Leipzig).

5044. Musatti, C. M. Forma e movimento. (Form and movement.) *Atti Ist. veneto.*, 1937, 97, pp. 35.—Movement has been viewed by Gestalt psychologists as a dynamic form not differing in type from static forms. The author examines the role of movement in the structuration of the perceptive field, and attempts to demonstrate how solidarity in the movement dissociates static groupings in order to constitute preponderant forms, or "good" forms. An extensive series of examples is given.—(Courtesy *Année psychol.*).

5045. Poos, F. Über die Eignung der Pupille als Testobjekt für pharmakologische Reaktionen und Pharmakodiagnostik am Auge. (The suitability of the pupil as a test object for pharmacological reactions and pharmacodiagnosis of the eye.) *Ergebn. Physiol.*, 1939, 41, 882-916.—*P. L. Krieger* (Leipzig).

5046. Popov, N. T., & Kriagev, V. J. [Modifications of the visual threshold in a case of bilateral section of the oculomotor nerves.] *Probl. Fiziol. Patol. Org. Chuvst.*, 1936, 59-62; 212.—Employing the method of conditioned reflexes, the authors determined the visual threshold in a dog which had undergone section of the oculomotor nerves. An elevation in sensitivity was observed, which the authors hesitate to ascribe only to a variation in pupillary diameter.—(Courtesy *Année psychol.*).

5047. Schubert, G., & Brecher, G. A. Labirinthäre Vertikalabweichungen der Augen beim erwachsenen Menschen. (Vertical deviation of the eyes of labyrinthine origin in the adult.) *Z. Hals-Nas. u. Ohrenheilk.*, 1938, 43, 451-457.—For the formation of an optically homogeneous visual field, vertical deviations of the eyes, which are to be considered as otolith reflexes, occur in the normal adult as soon as the direction of the force of gravity in the body changes or centrifugal force begins to act. The otolith organs are in a state of excitation in every position of the body (contrary to Quix's opinion).—*P. L. Krieger* (Leipzig).

5048. Schütz, W. Die Taubstummen in Deutschland. Diagnose, Ursachen und Verbreitung der erblichen und erworbenen Formen. (The deaf-mutism in Germany. Diagnosis, causes, and distribution of the hereditary and acquired forms.) Leipzig: J. A. Barth, 1939. Pp. 68.

5049. Spatze, W. Über die Vererbung der Innenohrschwerhörigkeit. (On the heredity of

inner-ear deafness.) Erlangen: K. Döres, 1938. Pp. 37.

5050. Sterzinger, O. *Neue chemopsychologische Untersuchungen über den menschlichen Zeitsinn. Das Problem der 5-Minuten-Zeitstrecke.* (New chemo-psychological investigations of the time sense in human beings. The problem of the 5-minute interval.) *Z. Psychol.*, 1938, 143, 391-406.—Previous work by the author showed that thyroxin produced underestimation, quinine overestimation of time intervals in human beings—time estimation apparently depending upon metabolic rate. However, in contrast to consistent results obtained with other substances, the results for quinine showed a reversal for the 5-minute interval in certain individuals. This reversal is here further investigated. Results show that different individuals show a "reversal point" above and below which quinine has contrasting effects. For most individuals this is around 5 minutes, for some around 2 or 3 minutes. Whether an analogous reversal point is present for excitants, e.g. thyroxin, is yet to be determined.—G. F. J. Lehner (Vermont).

5051. Szász, A. [The resolving power of the eye and its testing.] *Mag. orv. Arch.*, 1938, 39, 643.—Using three charts having square and oblong figures varying from 30" to 120" in size, presented at 1 and 5 meters, the author is carrying out comparative examinations to determine the usefulness of his method for testing the resolving power of the eye.—D. J. Shaad (Boston, Mass.).

5052. Szewezuk, W. *Les illusions optico-géométriques.* (Geometric optical illusions.) *Trav. Lab. Psychol. exp. Univ. Cracovie*, 1938, 2, 89-140.—The author shows that the Müller-Lyer illusion is stronger when one grasps the whole of the figure, and that it is weakened when the perception of the fundamental straight line is accentuated. Accommodation appears to be the only process capable of taking account of all the facts, and, finding that with tachistoscopic presentation the illusion occurs least frequently with the shortest exposure, he concludes that the mechanism invoked has been decisively demonstrated. Models of concentric circles with insertion of Müller-Lyer figures lead to consideration of the role of accommodative variations. When we perceive something as a object the eye accommodates for the part of the field that we see as object, and for objects of different dimensions accommodation "must necessarily be different," which thus effects different retinal dimensions. Hence illusions are only apparently illusory, and are manifestations of the dioptric laws involved in each perception.—(Courtesy *Année psychol.*).

5053. Tanaka, Z. [The perception of figures based upon the exposure time.] *Jap. J. Psychol.*, 1939, 14, 71-88.—4 psychology students observed 25 geometrical figures. The experimental conditions and apparatus used were almost the same as those of Tomoda (The perception of figures based upon form and size, *Jap. J. Psychol.*, 1937, 12, 433-450), but the time of exposure was varied; the shortest

exposure time was 6σ and increments of 2σ were added. Under each exposure condition each subject had 5 trials per figure, and his introspections were recorded immediately. The criterion for complete perception was 3 perfect reproductions out of 5 trials in every series of tests under the same experimental conditions. The results are divided into four sorts of visual experiences in accordance with the lengthening of exposure time: a non-perception period where the subject is unable to perceive any figure in spite of a real stimulus; a "halo-phenomenal" one where he sees something but cannot identify it with the real form of the figure; a transformed perception period in which he perceives phenomenally different figures; and a perfect perception period where figure and perception are the same.—R. Kuroda (Keijo).

5054. Tscherning, M. [Concerning human vision.] *Hospitalstidende*, 1938, Dec. 13, 8-12.—The elimination of the blind spot and the shadows of the retinal vessels from the normal field of vision is explained by the fact that prolonged fixation of a lighted area results in "overflowing" into darker areas, giving the appearance of a uniformly lighted area.—D. J. Shaad (Boston, Mass.).

5055. Urban, F. M. The method of equal-appearing intervals. *Psychometrika*, 1939, 4, 117-131.—The results of J. P. Guilford's card-sorting experiment by the method of equal-appearing intervals are analyzed mathematically. The constants of the psychometric functions are obtained by processes analogous to the constant process. When these constants are determined (1) independent of the supposition that the series of groups into which the cards were sorted is quantitative in character, and (2) under this supposition, good agreement is found between them. Guilford's results agree with Weber's and Fechner's laws in both cases.—(Courtesy *Psychometrika*).

5056. Vishnevskii, H. [Charting of the blind spot as a diagnostic and prognostic procedure in ocular diseases.] *Věstn. Ofal.*, 1938, 13, 799.—Registering recognition of the test object rather than its disappearance in mapping the blind spot, the author shows that there is no interrelation between size of the blind spot and visual acuity or intra-ocular tension, though with marked postoperative lowering of tension the blind spot may be enlarged. In retrobulbar neuritis the blind spot is smaller than in other diseases of the optic nerve; in glaucoma extension of the upper and lower borders of the blind spot is more significant than enlargement. With correction, with low acuity, blind spots are smaller than when glasses are not worn. In myopia with myopic conus and posterior staphyloma, the blind spot is enlarged. In diagnosis of neurovisual lesions, comparison of the sizes of the two blind spots may be valuable.—D. J. Shaad (Boston, Mass.).

5057. Waugh, D. D. Ophthalmological requirements for employment—1939. *Amer. J. Ophthal.*, 1939, 22, 665-668.—Visual acuity requirements for U.S. Army, Navy, and civil service, New York State

and New York City civil service, New York State Motor Vehicle Bureau, and C.C.C. are included.—*D. J. Shaad* (Boston, Mass.).

5058. Weinert, H. *Bericht über den Dresdner Kindergarten für gehör- und sprachgeschädigte Kinder.* (Note on the Dresden kindergarten for children with defective hearing and speech.) *Z. Kinderforsch.*, 1939, 47, 404-413.—An analysis of the enrollment in this school during the period from 1931 to 1938, according to the nature of the defect, level of intelligence, degree of improvement under training, and type of school entered on leaving the special kindergarten.—*F. L. Goodenough* (Minnesota).

[See also abstracts 4962, 4963, 4984, 4994, 5081, 5107, 5226, 5281, 5380, 5406.]

LEARNING, CONDITIONING, INTELLIGENCE

(incl. Attention, Thought)

5059. Alverdes, F. *Zur Psychologie der niederen Tiere.* (On the psychology of the lower animals.) *Z. Tierpsychol.*, 1939, 2, 258-264.—Mechanistic biology was a healthy reaction to earlier naïve anthropomorphism, but the modern animal psychologist regards each organism as an active individual, not one driven by external stimuli. The individuality of animals is most clearly shown by their learning ability. The simplest form of learning is association or conditioning. Conditioning has been demonstrated even among unicellular animals like the paramecium. Worms and echinoderms can learn more quickly than unicellular animals, because the former possess a central nervous system.—*G. M. Gilbert* (Lehigh).

5060. Anderson, L. D. *Relation of physical growth to behavior illustrated by psychological test performance in relation to change in increment of stature or gain in weight.* *Proc. 3rd bienn. Mtg Soc. Res. Child Developm.*, 1939, 84-88.—A survey, with illustrative studies, of the methodology of inquiry into the relationship of physical growth to psychological development.—*R. C. Strassburger* (St. Joseph's College).

5061. Beck, L. H. *Conditioning and the coordination of movements.* *J. gen. Psychol.*, 1939, 20, 375-397.—The subjects were required to tap with the hand at a rate indicated by clicks. Eyelid closure in response to shock at various points in this movement cycle was the unconditioned response. "It was found that the presence or absence of conditioned winks depended upon the organization of the movement cycle, where organization of the movement cycle to a series of clicks is defined by the occurrence of one tapping movement when one click is omitted. The failure to organize the movement cycle leads to the absence of conditioning (6 subjects). The organization of the movement cycle is a sufficient and necessary condition for the occurrence of conditioning (90 subjects). The conditioned wink falls

in step with the beat-stroke of the movement cycle regardless of the position of the shock in the movement cycle and regardless of the method of introduction of the unconditioned response into the movement cycle (135 subjects). There is some indication that certain winks are coordinated with the back-stroke. The stability of the conditioned wink is variable, but does not depend upon the position of the shock in the movement cycle (90 subjects)."—*C. N. Cofer* (Brown).

5062. Bracken, H. v. *Die Altersveränderungen der geistigen Leistungsfähigkeit und der seelischen Innwelt.* (Age changes in mental ability and the intra-psychic world.) *Z. Altersforsch.*, 1939, 1, 256-266.—A general review of the literature, with special emphasis on American contributions.—*P. L. Krieger* (Leipzig).

5063. Brody, L. *Adult intelligence and pre-adult schooling.* *Sch. & Soc.*, 1939, 49, 746-748.—Weissenburg, Roe and McBride correlate achievement-test scores of adults with amount of education and Stanford-Binet scores and find a much closer relationship of achievement with intelligence than with number of years of schooling. Using their data, the opposite result is obtained if Pintner non-language test scores are substituted for the Binet. Similarly, a recasting of Sorenson's findings partially contradicts his conclusion that aptitude has more influence than schooling on achievement. Sources of error as well as techniques of research involved in the articles referred to are given.—*M. A. Lee* (Chicago).

5064. Bunch, M. E., & Lang, E. S. *The amount of transfer of training from partial learning after varying intervals of time.* *J. comp. Psychol.*, 1939, 27, 449-459.—Partial learning of a 5-unit water maze by 382 rats was followed, after intervals varying from 0 to 120 days, by learning of a 14-unit water maze. Trials, time, and errors involved in learning the second maze indicate: (1) that transfer occurs regardless of the amount of time elapsed between learning of the mazes, (2) that the amount of transfer at first increases and then decreases as the interval increases, and (3) that the amount of transfer is as great 120 days later as it is immediately after partial learning of the first maze.—*N. L. Munn* (Vanderbilt).

5065. Cole, L. E. *A comparison of the factors of practice and knowledge of experimental procedure in conditioning the eyelid response of human subjects.* *J. gen. Psychol.*, 1939, 20, 349-373.—In human conditioning a subjective factor must be recognized. Some regard this factor as "expectancy," others as a response to instructions, and some as a facilitating or inhibiting attitude. A wink response to shock on the cheek was conditioned to a light. One group of subjects (naïve) was not told of the procedure, another (sophisticated) had most of it explained. All but one of 22 naïve subjects were easily conditioned and the response extinguished. After training and extinction an "on-off" series was given, some stimuli being reinforced and some not, in a regular order. 10 subjects could

follow this order. Instructions for this series restored the previously extinguished CR in 11 of 13 cases. For the sophisticated subjects extinction was very rapid, and some of them showed "conditioning" before the first paired presentation of stimuli. Little difference in stability of the CR for naïve subjects given 25 or 50 training trials was found. While a perceptual factor involving response to the total situation seems important in human conditioning, in an on-off series the S's could report the order but could not follow it with the lid response.—C. N. Cofer (Brown).

5066. Daniel, R. S. The distribution of muscular action potentials during maze learning. *J. exp. Psychol.*, 1939, 24, 621-629.—In this study subjects learned a blind stylus maze in which the only cues were kinesthetic. Activity in terms of action-potential levels was sampled from the dorsal surface of the forearms and lower legs, at the area of greatest enlargement, during each of 10 trials and during each rest period between trials. As learning progressed a decrease was found in the tensional level, followed by an increase lasting up to the point where practice was discontinued. Decreasing tension is associated with the elimination of errors and the development of a particular co-ordination. Increasing tension is associated with increased speed of performance and the more efficient use of the co-ordination. Differential tensional patterns appear to persist in direct relation to the distance of the part measured from the performing member. It is suggested that the patterns found are influenced by gradients and postural factors.—H. W. Karn (Pittsburgh).

5067. Dennis, W., & Russell, R. W. Comments on recent studies of VTE. *J. genet. Psychol.*, 1939, 54, 217-221.—Muenzinger, in recent papers dealing with certain choice-point behavior observed in the white rat, has suggested that such activity be called "vicarious trial and error" (VTE) and "implies that the relation of head movements to learning is an unexplored problem." He thus neglects earlier experimental results reported by Lashley, Peterson, and Dennis in separate papers. The term VTE has not yet been adequately defined.—D. K. Spelt (Mississippi).

5068. Erickson, S. C. The relative effect of a cerebral lesion upon learning, retention, and transfer. *J. comp. Psychol.*, 1939, 27, 373-391.—Six groups, comprising between 27 and 45 rats each, all of approximately equal learning ability, were tested on 12-unit multiple-T mazes of about equal difficulty. In each of three experiments a control and an operated group were tested. The experiments dealt, respectively, with learning, retention, and transfer following removal of an average of about 18% of the cerebral cortex. 42% of the operated and none of the controls failed to learn; 28% of the operated and none of the controls failed to evidence transfer; and 16% of the operated and none of the controls failed to relearn. "The splitting of the operated groups into successes and failures appears to be an 'all-or-none' phenomenon, and it indicates the presence of a

distinct qualitative difference in performance in all three of the test conditions. Our data disprove Maier's conclusion that maze learning and reasoning are different and distinct mental operations in that failures are present in one and absent in the other." Poor learners were more susceptible to the effects of the lesion. A critical lesion area below which there was no effect is suggested. Bibliography.—N. L. Munn (Vanderbilt).

5069. Exarchopoulos, N. [Concerning the influence of external factors on intelligence. A contribution to the study of the nature of intelligence and its educability.] *Prakt. Athen. Akad.*, 1937, 12, 432-448.—A study was undertaken for the purpose of determining the influence of favorable first-year school conditions upon the IQ. The subjects were 141 children, of both sexes, in the first year of the Athens University Experimental School. A Binet-Simon intelligence test was administered to each child, once at the beginning of the school year (October) and once at the end (May). The following results were obtained: (1) in 71% of the subjects the second test revealed an increase of IQ; (2) the average increase in IQ for those subjects who showed an increase was 7.5 points; (3) in a small number of subjects the IQ remained constant for the two tests, and in a still smaller number showed a decrease.—R. M. Gagné (Brown).

5070. Grabowski, U. Experimentelle Untersuchungen über das angebliche Lernvermögen von *Paramaecium*. (Experimental studies on the alleged learning ability of the paramecium.) *Z. Tierpsychol.*, 1939, 2, 265-282.—The author disputes Bramstedt's claim of having demonstrated learning ability in the paramecium. Bramstedt's experiments were repeated under the same conditions, with further controls. The "learning ability" attributed to the paramecium was found to be partly an artifact of changing physical conditions (CO_2 content, surface tension, etc.) and partly gratuitous conjecture on the part of the experimenter. The conception of space attributed to the paramecium is not found even in man under comparable circumstances. Neither Bramstedt's nor the author's results require any explanation beyond mechanical responses to external stimuli.—G. M. Gilbert (Lehigh).

5071. Grindley, G. C. *The intelligence of animals*. London: Methuen, 1937. Pp. vii + 70. 2/6.

5072. Griswold, F. H. *Creative power, the phenomena of inspiration; an inquiry into the practical methods used by men of genius in developing original ideas*. Philadelphia: McKay, 1939. Pp. 176. \$1.50.—Based on the statements of those who have attained fame in the creative arts.—(Courtesy Publishers' Weekly).

5073. Jackson, T. A., & Dominguez, K. Studies in the transposition of learning by children: II. Relative vs. absolute choice with multi-dimensional stimuli. *J. exp. Psychol.*, 1939, 24, 630-639.—"Eight pre-kindergarten children were trained to choose the larger, darker, wider, and less striped of two four-dimensional stimuli. They were then

given 200 trials of practice at the rate of 25 trials per day. Three of the eight received three critical trials on transposed stimuli, following each day's practice. The other five were given no transposition trials until after 200 trials of practice. Of the latter group three subjects made stable absolute choice through five transposition trials. All three of the former group made stable relative choice in at least two sets of critical trials. Choice time was markedly greater for the transposition trials than for the training trials. The percent of increase in choice time was greater for the five subjects in the experimental group than for the three in the control group."—H. W. Karn (Pittsburgh).

5074. Karn, H. W., & Malamud, H. R. The behavior of dogs on the double alternation problem in the temporal maze. *J. comp. Psychol.*, 1939, 27, 461-466.—One dog learned the *rrl* sequence, but failed to continue the series beyond this stage in later tests. A second dog developed what appeared to be an experimental neurosis and failed to achieve mastery of the problem. Hunter's hypothesis of a symbolic process is accepted as explanation of the results with the first-mentioned animal.—N. L. Munn (Vanderbilt).

5075. Krugman, M. A comparison of distributions of clinic and unselected children on the Stanford-Binet intelligence examination. *Amer. J. Orthopsychiat.*, 1939, 9, 319-325.—12,454 children were given Binet tests by the psychologists of the Bureau of Child Guidance, Board of Education, New York City, during a 5-year period. They were divided into 2 groups, those referred as individual problems and those examined in the course of studies of whole grades in the public schools. The referred group tended to show an undue proportion of dull, while the survey group showed a similar trend for the bright.—R. E. Perl (New York City).

5076. Kuroda, R. Learning interpreted in the light of polarization. *Acta psychol. Keijo*, 1939, 3, 95-103.—Learning is identified with problem solving or adaptation of behavior. The field theories are thus disapproved. Indirect routes to the goal, accidental successes, and failures are called psychic poles, or aspects of psychic polarization. This is another name for correct orientation or comprehensive direction and control in solution of the problem. This theory is applied to maze learning in animals and to various kinds of human learning. Pre-learning, learning proper, and post-learning are distinguished, and the importance of pre- and especially of post-learning is stressed. Post-learning or higher-order learning as distinguished from over-learning (which consists of repetition), has generally been called skill, and is the most important phase of learning. The transformation seen in learning is psychic polarization, and a matured polarization is the psychological foundation of skill.—R. Kuroda (Keijo).

5077. Lord, E. The effect of infectious disease on mental development. *Proc. 3rd bienn. Mtg. Soc.*

Res. Child Develpm., 1939, 53-57.—Three methods of appraising the effect of infectious disease upon development are exemplified and evaluated.—R. C. Strassburger (St. Joseph's College).

5078. Löw, A. Assoziation und Wiedererkennen in typenkundlicher Beleuchtung. (Association and recognition from the typological point of view.) *Z. Psychol.*, 1938, 143, 212-298.—The author seeks to determine what typological differences, if any, manifest themselves in learning. Two series of nonsense syllables, 16 pairs in a series, were serially presented to 38 subjects. The series were read aloud 14-16 times. Testing occurred after 20 minutes or 24 hours, using either the "association technique," in which one syllable was presented and S supplied its associate, or the "recognition technique," in which S indicated the "right" or "wrong" (and his degree of certainty) of the presented pair. In both series new syllables were introduced as checks. The results obtained permit division of the subjects into 2 groups, the "associative" and the "recognitive." The former make a good score with the association method, a poor one with the recognition method. The reverse holds for the other group. These group differences were substantiated by a color-form test, the "associative" being "color perceivers," the "recognitive" "form perceivers." According to Kretschmer's work, this would "type" the former as cyclothymes, the latter as schizothymes. The former tend also to be audiles, the latter visiles.—G. F. J. Lehner (Vermont).

5079. Matousek, M. A. Reproductive and retroactive inhibition as a function of similarity in the recall and recognition of paired associates. *Cath. Univ. educ. Res. Monogr.*, 1939, 12, No. 1. Pp. 42.—A study was set up to investigate the influences of similarity in paired associates of names and dates in the relationship between original and interpolated activity. The conclusions include: (1) retroactive inhibition affected both recall and recognition; (2) every form of interpolated activity interfered with retention more than did rest; (3) retention measured by recognition was consistently higher than retention measured by recall; (4) retention was poorest when interpolated pairs had an identical name and different date from the original, and was best when both name and date were unlike the original; (5) there was some decrease in retroaction with increase in chronological age, level of brightness, and mental age.—D. G. Ryans (William Woods College).

5080. McCulloch, T. L. The role of clasping activity in adaptive behavior of the infant chimpanzee: I. Delayed response. *J. Psychol.*, 1939, 7, 283-292.—An object (paper toweling) which would elicit clasping activity in an infant chimpanzee in disturbing situations was successfully used as lure in tests of delayed response. In a single-receptacle situation delays of as much as one hour were obtained with a chimpanzee of 17 months. Peculiarities of behavior are listed and suggestions are offered for an analysis of some of the factors involved in the delayed response situation.—J. McV. Hunt (Brown).

5081. McCulloch, T. L. The role of clasping activity in adaptive behavior of the infant chimpanzee: II. Visual discrimination. *J. Psychol.*, 1939, 7, 293-304.—When 2 chimpanzee infants were trained in the acquisition and subsequent reversals of black-white discrimination habits with objects of clasping as lures, it was found necessary to keep the subjects disturbed for satisfactory performance. Clasping the objects served to reduce the degree of disturbance.—*J. McV. Hunt* (Brown).

5082. McCulloch, T. L. The role of clasping activity in adaptive behavior of the infant chimpanzee: III. The mechanism of reinforcement. *J. Psychol.*, 1939, 7, 305-316.—This paper presents a theoretical integration of the experiments reported under the same title. Clasping is believed to serve as a reinforcing agent by inhibiting responses to disturbing stimuli, not by removing the stimuli. In the argument primates are assumed to possess a reaction tendency for clasping which persists throughout life but is particularly strong in infants. The clasping response is facilitated by situations which increase the state of excitement in the animal, and it tends to inhibit other responses of the organism to the disturbing situations. Thus, an approach response is established to the object clasped because stimuli from that object become associated with the approaching which just precedes the clasping. Difficulties with the theory of reinforcement involving removal of the stimuli are mentioned. The writer argues that inhibition of activity by a predominant response may be interpreted to be the reinforcing mechanism in any situation where the former theory is appropriate, and, moreover, that in the experiments mentioned it appears to be appropriate when stimuli cannot be removed.—*J. McV. Hunt* (Brown).

5083. McCulloch, T. L., & Bruner, J. S. The effect of electric shock upon subsequent learning in the rat. *J. Psychol.*, 1939, 7, 333-336.—A litter of hooded rats, 90 days old, was divided into two groups of 3 each, one of which was exposed to electric shock over a period of 10 days. Both groups were subsequently trained to mastery of a brightness discrimination habit, with shock as one motivating condition. The group which had previously been shocked required more training for acquisition of the habit. Hypotheses amenable to test by experiment are advanced to account for this fact: (1) The original shock treatment had a general effect which retarded the formation of new associations. (2) The shock was defective as a motivating condition in the discrimination situation because a new response to shock had been established in the shock treatment which inhibited the usual violent avoidance response.—*J. McV. Hunt* (Brown).

5084. Merlevede, D. Contribution à l'étude du transfert de l'effet de l'exercice moteur. (Contribution to the study of the transfer of motor training.) *Acta psychol.*, Hague, 1939, 4, 305-322.—Employing three machines, a pivoted wheel, a sliding weight, and a pivoted lever, with which one group had

previously practiced making asymmetrical movements with two hands, while another group had not, tests were given to show which group did better when speed and precision in operating these machines were demanded. The pre-exercised group was found to do worse than the other group except when the signal was given by a metronome rather than verbally.—*R. C. Givler* (Tufts).

5085. Miller, J. The rate of conditioning of human subjects to single and multiple conditioned stimuli. *J. gen. Psychol.*, 1939, 20, 399-408.—The eyelid response to shock administered to the cheek was conditioned to a pitch change in a sound and to movement of a black pointer on a white background. The number of CR's appearing during 50 paired presentations was the measure of conditioning. 30 students in 3 groups of 10 each were the subjects. Group A was stimulated by both the pointer and the sound, B by the sound alone, and C by the pointer alone. 50 paired presentations were administered, followed by an extinction series. Group A showed a CR frequency of 81%, B of 45%, and C of 23%. Group A showed a faster rate of conditioning, earlier conditioning, and a greater degree of conditioning than B or C. The coefficient of variation for A was 21.6, for B 74.2, and for C 84.1. The difference in results for Groups B and C may be an artifactual one. The three groups did not differ in rates of extinction. The results are discussed with respect to arguments by Pavlov and Guthrie.—*C. N. Cofer* (Brown).

5086. Millisen, R., & Van Riper, C. Differential transfer of training in a rotary activity. *J. exp. Psychol.*, 1939, 24, 640-646.—"Using a continuous cloverleaf-patterned maze, one group of subjects was trained in clockwise and another group in counterclockwise rotation, using a right-angled stylus. Tests given prior and subsequent to training indicated (1) that training was specific to direction of rotation, and (2) that the transfer of training to the left hand was greatest in the direction opposite to that used in training the right hand."—*H. W. Karn* (Pittsburgh).

5087. Mitchell, F. W. The nature of mathematical thinking. *Aust. Coun. educ. Res. Ser.*, 1938, No. 53. Pp. 130. 7/-.

5088. Nissen, H. W., & Taylor, F. V. Delayed alternation to non-positional cues in chimpanzee. *J. Psychol.*, 1939, 7, 323-332.—When two stimulus-boxes differing markedly in size, color, form, and opening device were used, Moos, a male chimpanzee approximately 9 years old, was able to respond alternately to one and then the other with an accuracy of at least 76%, or 8 sigma above a chance value of 50%. Successive responses occurred at approximately 40-second intervals, the boxes being completely out of sight of the subject for a delay period of about 6 seconds of this time. There was almost no difference in scores when Moos was and was not shown baiting of either the correct or incorrect box before the delay interval. Control sessions indicated (1) that the subject was not get-

ting his cue from the experimenter or from placement and location of the lure, (2) that the chroma-brightness difference alone was not an adequate cue, and (3) that the non-spatial alternation of the two stimulus boxes was a necessary condition for above-chance scores. Greater accuracy of response was obtained when the boxes were shifted, in random sequence, in one plane, than when they were shifted among four positions in two planes.—J. McV. Hunt (Brown).

5089. Ohtsuka, N. Ein Beitrag zur Wahl der Mitte mit dem Vielfach-wahl-apparat bei Affen. (A contribution to the choice of the middle in the multiple-choice apparatus in monkeys.) *Acta psychol. Keijo*, 1939, 3, 86-94.—The monkeys were trained to choose the middle hole in a multiple-choice apparatus. When there are three holes the middle one is successfully chosen, but when there are five the choice is unsuccessful. The author then noticed from his control experiment that the choice of the monkeys in the case of three holes is the second hole from either right or left. His results are compared with those of Bierens de Haan and Yerkes.—R. Kuroda (Keijo).

5090. Razran, G. H. S. Decremental and incremental effects of distracting stimuli upon the salivary CR's of 24 adult human subjects (inhibition and disinhibition?). *J. exp. Psychol.*, 1939, 24, 647-652.—The effect of sounding a buzzer upon a salivary CR to a flash of red light was studied in adult human subjects. The buzzer was applied at 12 different stages of partial extinction of the CR's. The buzzer was shown to exert a double effect: while it suppressed the existing conditioned salivation, it restored the loss of conditioned salivation resulting from extinction. A correlation of $.91 \pm .02$ was obtained between degree of the extinction of the CR and the incremental effect of the buzzer. The incremental or extinction-restoring effects of the buzzer were shown to be about 50% greater than the decremental or conditioning-suppressing influences.—H. W. Karn (Pittsburgh).

5091. Ri, G. The effect of *Panax ginseng* and *Platycodon grandiflorum* on the maze learning ability of white rats. *Acta psychol. Keijo*, 1939, 3, 61-73.—This study was executed just after R. Takatsuki and N. Ohtsuka's on the effect of *Panax ginseng* extract upon learning ability reported in 1936. The author found that the effect of *Panax ginseng* or *Platycodon grandiflorum* solution upon learning ability is negative in the former and obscure in the latter; the effect upon the change of body weight is consistently positive in the former and negative in the latter.—R. Kuroda (Keijo).

5092. Rytal, M. La mémorisation et les schèmes conceptuelles. (Memorization and conceptual schemes.) *Trav. Lab. Psychol. exp. Univ. Cracovie*, 1938, 2, 158-218.—Figures, some simple and some complex, made by pasting colored papers on card-board, were presented tachistoscopically, and the subjects were required to reproduce what they had seen. A series of successive presentations was made,

during some of which the subjects were required to perform simultaneously another task. Reproductions at first indicated a defective representation, with the forms simplified and rendered both regular and symmetrical, and with the colors only approximated. Only little by little was there established a precise differentiation yielding more exact reproductions. Mnemonic assimilation does not appear as passive, but involves a veritable "re-creation."—(Courtesy *Année psychol.*).

5093. Sackett, R. S. The effect of strength of drive at the time of extinction upon resistance to extinction in rats. *J. comp. Psychol.*, 1939, 27, 411-431.—Rats deprived of food for 6 hours received training until they pressed a bar, which delivered a pellet of food, 15 times. 48 hours later, after half of the rats had been deprived of food for 6 hours and half for 30 hours, they were allowed to press the bar without obtaining food. This extinction training continued until each animal had failed to make a response within 20 minutes. There was some statistically unreliable evidence of increased resistance to extinction in the hungrier group. The greater resistance of the hungrier group is evident in Vincent curves. Extinction curves were similar in shape; that for the hungrier group was at most points slightly above the other and it was slightly longer. Conditioning to the specific strength of the drive (6-hour hunger) was not apparent, but may have been obscured by "the greater energizing influence of an increase in drive." Bibliography.—N. L. Munn (Vanderbilt).

5094. Sagara, M. [The assimilative process as a factor of inhibition in memory.] *Jap. J. Psychol.*, 1939, 14, 9-28.—As to retroactive inhibition in memory, two theories—conservation and transfer—have been developed. The transfer theory states further that homogeneous or heterogeneous organization of the mental field decides the facilitation or inhibition of memory. The author adopted three sorts of memory materials each consisting of three series, two being heterogeneous and the other intermediate—alphabets, figures, and their combinations; thick, thin, and medium nonsense figures; and technical, popular, and intermediate terms. He concluded that homogeneity is really a factor in inhibition, but it is so only to a limited extent; it seems also that there is an assimilative process, in the trace field.—R. Kuroda (Keijo).

5095. Sagara, M. [Paired associates and the reproduction of their articulated members.] *Jap. J. Psychol.*, 1939, 14, 89-96.—The author reports this study as a critical one for S. Kuraisi's (*Rep. 5th Cong. Jap. Psychol. Ass.*, 1935, 184; *Rep. 6th Cong. Jap. Psychol. Ass.*, 1937, 99; *Jap. J. Psychol.*, 1937, 12, 578). After his three series of tests he suggests that in such reproduction as is done under the method of paired associates, the organization factor of one articulated member presented (the direct stimulus) has not always the same effect as the trace organization of the other member, not presented (the reaction material); and that the latter seems to affect the

correctness of the associates more strongly than does the former.—*R. Kuroda* (Keijo).

5096. Simpson, B. R. The wandering IQ: is it time for it to settle down? *J. Psychol.*, 1939, 7, 351-367.—This detailed criticism of the studies from the University Schools of Iowa University is directed particularly against the claim that the intellectual ability of children can be materially raised by their environment. Points criticized include the following: the Iowa studies fail to present the mental development of the same individual from age to age, but present the average IQ of rapidly diminishing or changing groups, thus ignoring the selective factors operating. No consideration is given the influence of the hereditary factor in accounting for individual differences from group to group. A reported IQ drop of 22 points from age 5 to age 14 is attributed in one of the studies to faulty standardization of the Stanford-Binet test; the fact that this apparent drop may be accounted for by selection alone (the children who took their first test at 2 or 3 were not the same children who took their first test at 5, 10 or 14) is not considered. Likewise apparent gains in the IQ for the entire group may be accounted for on the principle of the survival of the fittest, as the numbers are reduced from 1333 to 33 from the first test to the seventh. Switching tests without keeping separate the records of the children given one or the other, vagueness in reporting the selection of groups under consideration, and errors in the tabulations are also mentioned.—*J. McV. Hunt* (Brown).

5097. Smith, M. F. The establishment and extinction of the token-reward habit in the cat. *J. gen. Psychol.*, 1939, 20, 475-486.—The primary token-reward response was that of pushing a ball into a hole to secure food. A secondary response of depressing a string was established in relation to it. 8 adult cats were used, 4 of which (Group 1) were trained first on the primary habit and later in the use of the string, 3 of which (Group 2) simply depressed the string to get food, and 1 of which (No. 5) used the string first and the balls later. Extinction of these habits was carried out. The ball habit was learned in from 5 to 10 days (10-20 trials a day); the cats "were slow in generalizing a response to the ball independent of its positional aspects." Group 1 learned the string habit as readily as group 2. This is interpreted as due to a transfer effect from the primary manipulative response. For group 1 and No. 5 there was no significant difference between numbers of extinction trials for response to string alone and to the string-ball sequence. Extinction curves are similar to those obtained in the extinction of a lever habit in cats following varying periods of water deprivation.—*C. N. Cofer* (Brown).

5098. Stott, L. H., & Ruch, L. L. Establishing time-discriminatory behavior in the white rat by use of an automatically controlled training and recording apparatus. *J. comp. Psychol.*, 1939, 27, 491-503.—The writers describe an apparatus which will condition rats to respond in terms of given time intervals while the experimenter performs his other duties.

Learning to remain on the bottom of a box for a given length of time (56 to 420 seconds in the present experiment) and then to jump to a platform until a new trial began was the task set. If the animal jumped to the platform too soon it received a shock. It also received a shock if it failed to jump to the platform within the given period. The rat was dumped to the bottom of the box to start a new trial. The automatically controlled cycle or trial consisted of being dumped to the bottom of the box, waiting there, the jump to the platform after the given interval, and a rest period during which the rat remained on the platform. Each trial required 9 minutes. 10 successive trials were given before the experimenter came and took the animal from the apparatus. Preliminary data are reported for four rats and one human subject. The constant error was negative and the limen was from 20 to 25% for the rats and 22% for the human subject.—*N. L. Munn* (Vanderbilt).

5099. Torp, H. Le phénomène "déjà vu." (The phenomenon of "déjà vu.") *Acta Psychiat., Kbh.*, 1938, 13, 659-665.—This phenomenon has been referred to as "false recognition, faulty identification, an impression of something previously experienced, a little of one's former life." The characteristics of "déjà vu" are discussed and theories by Bernard Leroy, Stern, Bergson, and Janet are presented. Several case studies are included.—*F. J. Witmer* (Mooseheart Laboratory for Child Research).

5100. Tschakhotine, S. Réactions "conditionnées" par microponction ultraviolette dans le comportement d'une cellule isolée (*Paramecium caudatum*). ("Conditioned" reactions by ultraviolet micropuncture in the behavior of unicellular organisms—*Paramecium caudatum*.) *Arch. Inst. prophyl., Paris*, 1938, 10, 119-131.—Paramecia placed in drops of water (1 mm. diam.) at first move in random fashion, but after a few minutes begin an extremely regular circling course around the edge of the drops. Ultraviolet rays (25 X 100 μ diam.) shot at some point produce characteristic deviant movements. After 30-80 trials the paramecia become conditioned and exhibit the deviant movements when they just arrive at the position of the rays. This conditioning lasts for about half an hour, after which the protozoa resume their original circlings. Reconditioning is faster, requiring only 10-30 trials, and transfers to other drops cause losses in the CR's, which however can be revived in 10-20 trials. Paraffinated slides were used.—*G. H. S. Razan* (Columbia).

5101. Walker, E. L., & Kellogg, W. N. Conditioned respiration and the conditioned flexion response in dogs. *J. comp. Psychol.*, 1939, 27, 393-409.—The buzz-shock technique was used to ascertain how conditioning, extinction, and reconditioning of the respiratory response compare with conditioning, extinction, and reconditioning of forepaw flexion. 4 dogs were conditioned. The criterion was 19 CR's in a day's series of 20 stimulations. This criterion was attained in an average of 43 trials

for respiration and 97.5 for flexion of the forepaw. Extinction for respiration (which was overconditioned due to continuance of training on the flexion response after the criterion for respiration had been reached) was slower than for the flexion response. Respiration also gave evidence of reconditioning faster than flexion, which nevertheless gained in stability during reconditioning. Bibliography.—N. L. Munn (Vanderbilt).

5102. Yamane, K. [An experimental study on the conditions of hearing. III. Stylus maze learning and auditory guidance.] *Jap. J. Psychol.*, 1939, 14, 29-41.—35 male pupils 14 to 18 years old were asked to trace blindfold a maze with a stylus. The subjects were divided into three groups, one which was corrected verbally at the end of a blind alley, another corrected at the center of the blind, and a third which had no guidance at all. Trials, time, and errors were recorded. Only entrances into the blind were counted as errors, and 3 consecutive successes were the criterion for mastery. The results show that verbal information has a positive influence upon learning; no difference is found between the two test groups; instructed groups show higher efficiency in relearning a week later; and the difficulty of the elimination of culs-de-sac in a maze is decided by the configuration of the whole maze rather than by each cul-de-sac alone.—R. Kuroda (Keijo).

5103. Yerkes, R. M., & Nissen, H. W. Prelinguistic sign behavior in chimpanzee. *Science*, 1939, 89, 585-587.—After varied and long-continued training of individuals of the Yale chimpanzee colony, the authors conclude that symbolic processes occasionally occur in the chimpanzee, but are relatively rudimentary and ineffective, and show little increase in frequency and functional value with increase in experience and age. They consider most significant the evidence that delayed response, "in the absence of spatial cues or with misleading cues, is extremely difficult or impossible for most chimpanzees." This suggests that they "may have happened upon an early phylogenetic stage in the evolution of symbolic process."—F. A. Mote, Jr. (Brown).

[See also abstracts 5105, 5137, 5257, 5316, 5329, 5389, 5414, 5415, 5428.]

MOTOR AND GLANDULAR RESPONSES (incl. Emotion, Sleep)

5104. Antonius, O. Über die Schlangenfurcht der Affen. (On monkeys' fear of snakes.) *Z. Tierpsychol.*, 1939, 2, 293-296.—On the basis of observations on various species of monkeys and apes, the author suggests that there is no "inborn" fear of snakes, but that the reaction is a learned one, as in humans.—G. M. Gilbert (Lehigh).

5105. Antonius, O. Zum Domestikationsproblem. (On the problem of domestication.) *Z. Tierpsychol.*, 1939, 2, 296-302.—Hediger's theory of "biological inferiority" applies only to the cat. Pre-adaptation

does not necessarily determine the selection of species for domestication.—G. M. Gilbert (Lehigh).

5106. Armstrong, H. G. The blood pressure and pulse rate as an index of emotional stability. *Amer. J. med. Sci.*, 1938, 195, 211.—700 men between the ages of 18 and 28, applicants for the army air corps, were classified as to emotional stability. Using data from their original examination forms, it was found that the correlation between relative emotional stability and cardiovascular findings (chiefly of blood pressure and not of the heart) was .98 for the stable group and .88 for the unstable.—M. P. Montgomery (Faribault, Minn.).

5107. Bass, R. I. An analysis of the components of tests of semicircular canal function and of static and dynamic balance. *Res. Quart. Amer. Ass. Hlth phys. Educ.*, 1939, 10, 33-52.—In analyzing 19 tests of balance and semicircular function, 9 factors were found, of which 5 are tentatively identified. Static balance probably involves at least: the three semicircular canals, combined into two sets; kinesthetic sensitivity and response; tensions reinforcing the goal response (balance); and some visual factor. Dynamic balance involves the same factors, probably at a more complex level. The canals apparently do not function as much as is usually thought. Correlations with ratings of ability show that the function of balance, and particularly of dynamic balance, is of prime importance in sports and dancing. Bibliography of 40 titles.—F. W. Finger (Brown).

5108. Berg, H. Meteorotropie bei Bewusstseinsstörungen infolge einer Kriegsverletzung. (Atmospheric influences on disturbances of consciousness following a war injury.) *Bioklim. Beibl. Meteorol. Z.*, 1938, 5, 160-164.—On 46 out of 61 days on which attacks occurred in one patient, there were barometric shifts or movements of masses of air. Diurnal variations of temperature and bodies of land or water had no effect. On the other hand, solar processes, as represented by the earth's magnetism, appeared to have a certain influence.—P. L. Krieger (Leipzig).

5109. Berrien, F. K. Finger oscillations as indices of emotion. II. Further validation and use in detecting deception. *J. exp. Psychol.*, 1939, 24, 609-620.—In a previous study by the author a method of analyzing finger-movement records as indices of emotion was developed with psychotic patients as subjects. That paper also presented a method of analyzing the finger oscillations which resulted in a composite index. In the present study the technique was employed with normal subjects. Emphasis was placed upon detecting deception, but the effects of emotions other than the concomitants of deception was also examined. The conclusion from the early study remains justified; namely, that the existence of an atypical composite index is evidence of emotion, but the absence of an atypical index does not necessarily indicate the absence of emotion.—H. W. Karn (Pittsburgh).

5110. Britton, S. W., & Kline, R. F. On deslothizing the sloth. *Science*, 1939, 90, 16-17.—It was found that the low basal level of movement of the

sloth, as measured by its rate of travel along the under side of a 12-foot pole, could be effectively speeded up by raising its temperature 4° or 5°, by setting up an emotional reaction in the animal, and by administering extract of adrenal cortex, adrenalin, or prostigmin.—*F. A. Mote, Jr.* (Brown).

5111. Callewaert, H. *Physiologie de l'écriture cursive.* (Physiology of cursive writing.) Bruxelles: L'édition Universelle, 1937.—This work reports the results of observational and cinematographic study of handwriting. Cursive writing demands two basic functions: the "inscriptive function" of the thumb, index, and middle fingers, which trace the loops, and the "cursive function" connecting the loops, which is based on the rotation of the forearm around the axis of the fixated upper arm. Deviations from this technique are described, and prophylactic suggestions are made. Schoolroom practice involving straight horizontal lines interspersed with loops is advised. There are also a critical discussion of graphology and a suggestion that the relation between handwriting and somatic constitution be studied.—*C. N. Cofer* (Brown).

5112. Elbel, E. R. *A study in variation in response time.* *Res. Quart. Amer. Ass. Hlth phys. Educ.*, 1939, 10, 35-50.—Simple reaction time (hand flexion to bell) was measured as a function of time of day; a speed-accuracy target test was also employed. There were 23 male subjects, whose ages varied from 17 to 33 years. The results show the presence of two periods of greatest speed, one in the morning and one in the afternoon, the latter being the period of minimum response time. The slowest periods are early and late in the morning. The results of the speed-accuracy test do not follow a uniform trend. These scores tend to be best during the first morning period and worst in the following interval, with considerable fluctuation during the remainder of the day.—*F. W. Finger* (Brown).

5113. Galambos, R. *Potentials from the body wall of the earthworm.* *J. gen. Psychol.*, 1939, 20, 339-348.—"A description and discussion of the electrical activity accompanying typical spontaneous contractions of a worm" are presented. Isotonic contractions were secured from the body wall, and action potentials were recorded. Spontaneous contraction was accompanied by two kinds of electrical response: "(a) a burst of rapid potentials superimposed upon (b) a slow potential shift." Both anticipated contraction, but before maximum shortening occurred the rapid potentials diminished and disappeared, the slow potentials continuing after contraction. The amplitude of the slow component varied independently of the amplitude of the contraction; the rapid component and the contraction changed together. It is argued "that the rapid component represents the smooth muscle equivalent of the spike in the striated muscle action current, and that the slow potential is summed after-potentials."—*C. N. Cofer* (Brown).

5114. Göring, M. H. *Weltanschauung und Psychotherapie.* (Philosophical viewpoint and psy-

chotherapy.) *Hippokrates, Stuttgart*, 1938, 9, 1097-1103.—*P. L. Krieger* (Leipzig).

5115. Gurnee, H. *Measuring the steadiness of manual movement.* *Amer. J. Psychol.*, 1939, 52, 274-276.—*D. E. Johannsen* (Skidmore).

5116. Güttich, A., & Möhres, —. *Über eine Wasserdruck messende Funktion des Ohrlabyrinths.* (Measuring water pressure as a function of the labyrinth.) *Arch. Ohr.- Nas.- u. KehlkHeilk.*, 1939, 146, 16.—Minnows usually dwell at a depth of 1 meter below the surface of the water. If a sudden variation of 5 centimeters or more occurs in the water level, the fish reacts by exhaling air when pressure is decreased and coming to the surface for more air when the water pressure is increased. It appears that in this species the labyrinth has a barometric function.—*P. L. Krieger* (Leipzig).

5117. Hartson, L. D. *Contrasting approaches to the analysis of skilled movements.* *J. gen. Psychol.*, 1939, 20, 263-293.—The literature concerning the two viewpoints on the nature of skilled movements is reviewed. The two views are: (1) that all muscular movements are alike; (2) that movements may be differentiated into types. After a consideration of each of these views, there is a section entitled "Principles of motion economy in the light of movement analysis." Here postural factors, the speed and precision of ballistic movements, the use of gravity and momentum, the advantages of cursive over angular movements and of rhythmical over arrhythmic forms, and the importance of emphasizing form in training are discussed. A bibliography of 118 titles is included.—*C. N. Cofer* (Brown).

5118. Hirst, J. C., & Strousse, F. *The origin of emotional factors in normal pregnant women.* *Amer. J. med. Sci.*, 1938, 196, 95-99.

5119. Hubbard, A. W. *Muscular force in reciprocal movements.* *J. gen. Psychol.*, 1939, 20, 315-325.—The purpose of this study "was to determine the nature of the contractions driving reciprocal ballistic movements of the forearm." A simple flexion-extension movement of the forearm was recorded at 4 rates on a kymograph. Movements, action currents, and muscle deformation were recorded. The amplitude of the movements was constant. An index of the force exerted by the driving muscle was obtained "by plotting the velocity changes during the contraction against time." Graphs are presented for each of the rates, and "all showed the force of muscles to be essentially rectilinear." Neither antagonistic muscular contractions nor internal resistance of the muscles has significance here, so that "the tension developed in the muscle is an exact counterpart of the force exerted by the muscle on the limb." This tension development, like the force exerted on the limb, is essentially a constant.—*C. N. Cofer* (Brown).

5120. Hudgins, C. V. *The incidence of muscular contraction in reciprocal movements under conditions of changing loads.* *J. gen. Psychol.*, 1939, 20, 327-338.—The shift of the point of the muscular contraction in reciprocal movements was investi-

gated. 7 subjects tapped with no weight, with 204 grams, and with 464 grams attached to their hands, and kymographic records of action currents and hand movements were made. Vertical tapping with the palm up or down, and pendular tapping with the arm hanging vertically from the shoulder, were the conditions used. "The addition of weight to the hand causes the point of incidence to shift forward in the movement cycle (as compared with the condition of no weight), and the amount of shift is roughly proportional to the amount of weight added." The point also shifted when the position of the arm was changed with respect to gravity. Weight and gravity changes influenced flexor incidence less than extensor incidence. Peripheral tissues have control in reciprocal movements, rather than a central agency.—C. N. Cofer (Brown).

5121. Huhner, M. Impotence in the male. *Med. Rec., N. Y.*, 1939, 149, 366-370.—The author gives a definition of the condition, the common underlying causes, and the general methods of medical treatment. He places emphasis upon organic rather than upon psychological causes, and illustrates his points with 7 case histories. These are followed by brief discussions of unusual causes of impotence and of psychic impotence, with stress placed upon the urological as contrasted with the psychoanalytical methods of treatment.—M. H. Erickson (Eloise Hospital).

5122. Jalavisto, E., Keränen, L., & Seppälä, J. Über die Nachwirkung der statischen Beanspruchung des Muskels. (The effect of the static requirements of muscle.) *Skand. Arch. Physiol.*, 1939, 82, 1-28.—P. L. Krieger (Leipzig).

5123. Kinoshita, H. Electrical stimulation of *Paramecium* with linearly increasing current. *J. cell. comp. Physiol.*, 1939, 13, 253-261.—The time-intensity relation of linearly increasing currents for inducing the just detectable reversal of the ciliary stroke at the cathodic tip of *P. caudatum* in homodrome orientation is reported. Observed and calculated values agree. The rheobasic threshold is raised with long-continued currents, and this is in agreement with the theory. The effect of increased Ca in the medium was investigated.—O. W. Richards (Spencer Lens Company).

5124. Korb, E. M. A method to increase the validity of measuring posture. *Res. Quart. Amer. Ass. Hlth phys. Educ.*, 1939, 10, 143-149.—A method is described for judging the excellence of posture, the object of which is to decrease the subjectivity of estimates. Lines representing the standard of excellent posture (originally set up by Klein) are painted on a screen; upon this screen is projected the silhouette of the subject. Deviations from the norm are readily noted, and the posture in question can easily be graded. Reliability coefficients (corrected for broad categories) averaged .91 when judges repeated their scoring of 50 silhouettes.—F. W. Finger (Brown).

5125. Kup, J. v. Die Wirkung psychischer Reize auf das Zirbel-Hypophysen-Gleichgewicht. (The

effect of mental stimuli on pineal-adrenal balance.) *Frankfurt. Z. Path.*, 1939, 53, 101-104.—Hypersexuality, feelings of dizziness, and disturbances of the sex drive are results of mental stimulation. They finally lead to an excessive adrenal functioning and a disturbance of the pineal-adrenal balance. Similar subjective phenomena in persons living in abstinence are to be explained in the same manner.—P. L. Krieger (Leipzig).

5126. Kupfer, A. *Bases de la psycho-physiognomie pratique*. (Bases of practical psycho-physiognomy.) [Trans. of *Grundlagen der Menschenkenntnis*.] Malmsbach-Schwaig bei Nürnberg: A. Kupfer, 1939. Pp. 130. RM. 2.50.

5127. Kutzner, O. Das Leistungsprinzip in der privaten Lebensführung. (Accomplishment in private life.) *Z. angew. Psychol.*, 1939, 56, 228-236.—By "private" the author refers to non-vocational as contrasted with vocational duties. He discusses the relative amounts of psychological energy expended in each and the factors (especially those of an emotional nature) which determine the ease with which accomplishments are attained. It is a greater psychological strain to meet the non-vocational duties.—G. F. J. Lehner (Vermont).

5128. Meyer, H. Die Zuckungssummation bei Reizung des Muskels mit galvanischen Stromstößen verschiedener Spannung. (Summation of contractions by stimulating a muscle with galvanic shocks of different voltages.) *Z. Biol.*, 1939, 99, 387-396.—The comparative degrees of muscular contraction were determined by means of galvanic shocks of different voltages and of such duration as to give the same (limited) number of rhythmical stimuli. As such currents give stimuli of different rhythm, the conditions and hence the results of summation must differ according to the voltage. This expectation was confirmed, and it was also proved that the comparison on the premise of the maximal efficiency of the weaker current was regularly justified. As to the stimulus rhythm characteristic of the muscle, which leads mechanically to a very early increase of contraction summation, an opposition, within definite limits, was demonstrated in the power of galvanic currents of different voltages to produce frequency of stimulus and height of muscular contraction.—P. L. Krieger (Leipzig).

5129. Mies, H. Änderung des Ruhepotentials des Skelettmuskels bei selektiver Reizung vegetativer Nervfasern. (Changes in the resting potential of skeletal muscle with selective stimulation of vegetative nerve fibers.) *Z. Biol.*, 1939, 99, 372-378.—In frog's muscle a decrease of demarcation potential could be produced by stimulation of the adrenergic fibers with sinus currents of 0.1-0.125%, although no motor activity was recognizable. With the use of higher frequencies for selective stimulation of cholinergic fibers, there was usually no change in demarcation potential. The cause of this is that the stimuli must be very slight in order to remain selective, i.e., not to affect motor fibers. In rabbits, there is a difference in the effect of various frequencies

in that red muscle appears to be supplied more by adrenergic and white muscle by cholinergic fibers.—*P. L. Krieger* (Leipzig).

5130. Oberto, S. *L'analisi sperimentale delle qualità del volere.* (Experimental analysis of volitional quality.) *Arch. ital. Psicol.*, 1938, 16, 37-69.—There is a relationship between the morphological structure of the ergogram and the individual's volitional quality. Of the ergograms having an hyperbolic shape, 78.6% were obtained on individuals with strong volition who were steady and reflexive; parabolic ergograms belonged to strong-willed persons who were steady but impulsive in 80% of the cases; trapezoid types were obtained on persons strong-willed and steady but hesitant in 75% of the cases; 71.4% of the rectangular shapes belonged to weak-willed, inconsistent and impulsive people; 58.3% of the triangular ones were found to belong to those possessing these same characteristics in more pronounced form; and the sigmoid type was in all cases obtained on persons of mixed characteristics.—*H. Beaumont* (Kentucky).

5131. Pink, H. *Messende Versuche zur Theorie der elektrischen Reizung. 8 Mitt. Der Reizwert schwankungsfrei verlaufender galvanischer Stromstücke verschiedener Spannung, gemessen nach der "Summationsmethode."* (Quantitative experiments on the theory of electric stimulation. Pt. 8. The stimulation value of constant galvanic shocks of different voltage, measured by the "summation method.") *Z. Biol.*, 1939, 99, 379-386.—Pink tried to derive the relationship between voltage and the temporal phenomena in the galvanized muscle from the changed capacity of the muscle to contract. He confirmed completely Krencker's study of action currents. Pink's experiments tend to prove that, within certain limits, the period of rhythmical excitement of the muscle decreases with increasing tension. The demonstrable increasing quantitative relationship is based on the provisional tension curves of stimulus duration of constant galvanic shocks. These experiments definitely exclude the co-operation of the opening stimulus in producing the peaks of contraction.—*P. L. Krieger* (Leipzig).

5132. Schilling, R. *The mechanism of breathing for voice production.* *Arch. ges. Phon.*, Abt. 1, 1939, 3, 62.—In 1925 Schilling described a type of breathing corresponding to R. Curry's and D. Guthrie's "rib reserve." He thus anticipated these authors.—*P. L. Krieger* (Leipzig).

5133. Shlaifer, A. *Studies in mass physiology: Effect of numbers on oxygen consumption and locomotor activity of *Carassius auratus*.* *Physiol. Zool.*, 1938, 11, 408-424.—A single goldfish in a given amount of water uses more oxygen and has a higher rate of activity than either fish of a group of two or of four. In "conditioned" water the fish show the same group effect as in unconditioned water. In water "conditioned" from the fish living in it previously less oxygen is used than in unconditioned water.—*O. W. Richards* (Spencer Lens Company).

5134. Shock, N. W. *Physiological correlates of mental function.* *Proc. 3rd bienn. Mtg Soc. Res. Child Develpm.*, 1939, 2-5.—A brief summary of selections from the experimental literature embracing studies of electrical potentials of the brain, oxygen deprivation, the administration of benzedrine, diet deficiency, and endocrine function as related to mental phenomena and behavior.—*R. C. Strassburger* (St. Joseph's College).

5135. Sommer, J. *Elektrokardiographische Untersuchungen am Flusskrebs.* (Electrocardiographic studies on the crayfish.) *Z. Biol.*, 1939, 99, 397-413.—The findings are compatible only with the assumption of neurogenic automatism of the crayfish heart, as is amply confirmed by other anatomical, phylogenetic, and physiological studies.—*P. L. Krieger* (Leipzig).

5136. Sperry, R. W. *Action current study in movement coordination.* *J. gen. Psychol.*, 1939, 20, 295-313.—A kymographic method for recording muscle action potentials is described, and sample records obtained are presented. In rapid distal movements there were sharp contractions of supporting muscles of the trunk and upper limbs in pace with the distal movement. Serial contraction was found to be the main differentiating criterion of circular from straight reciprocal movements. Little difference in rate of maximal movement for these two types was found, the maximum for the latter being at 17.5 per second. Length of excursion influenced the rate of movement of the whole arm, and bending the elbow increased the maximum rate of movement of shoulder muscles. In certain fixations and slow movements made against forces, the antagonist muscles remain relaxed.—*C. N. Cofer* (Brown).

5137. Steinbacher, G. *Zum Problem der Haustierwerdung.* (On the problem of animal domestication.) *Z. Tierpsychol.*, 1939, 2, 302-313.—Physical and behavioral characteristics of the various animal species are undoubtedly important predisposing factors in domestication. However, a good deal more must be learned about the differences between domestic animals and the wild forms from which they descended before general rules can be safely formulated.—*G. M. Gilbert* (Lehigh).

5138. Steinhausen, W. *Über Modellversuche zur Physiologie des Labyrinthes.* (Experiments with models on the physiology of the labyrinth.) *Acta otolaryng.*, Stockh., 1939, 27, 107-122.—It is claimed that the semi-circular canal model described by Wittmaack in Vol. 24 of this journal is not a model for the Mach-Breuer current. Instead it is held to be a model of a vestibular ring closed in two places by plugs. It is clear that no Mach-Breuer current can take place in such a vestibular ring. Wittmaack's theory of the Mach-Breuer current is likewise regarded as erroneous. The theory of the Mach-Breuer current in connection with central and eccentric current is discussed in detail. A new model of the semi-circular canals is described. In this model the physical processes are recorded cine-

matographically. The records, along with other records on the physiology of the semi-circular canal system, have been combined into a film which is briefly explained.—E. M. Pilpel (New York City).

5139. Stone, C. P. **Sex drive.** In Allen, E., Danforth, C. H., & Doisy, E. A., *Sex and internal secretions*. Baltimore: Williams & Wilkins, 1939. \$12.00. Pp. 1213-1262.—The topic of sex drive is reviewed in this chapter under five main headings: (1) Erotization and activation, which includes a discussion of: (a) the role of the central nervous system and of hormones, (b) the onset of puberal sex behavior in relation to chronological age, (c) the different patterns of behavior characterizing the two sexes, and (d) the correlation of sex behavior with maturity of sex organs. (2) Seriation and periodicity, including studies on possible controlling mechanisms in the series of integrated behavioral episodes attending begetting and rearing offspring and on periodicity of aggressiveness and receptivity. (3) Measurements of intensity of sexual drives. Five methods are listed, as follows: (a) present or absence method, (b) frequency of sexual response in a standard test interval, (c) indirect measures, such as the activity cage and obstruction apparatus, (d) counterbalance of competitive drives, and (e) learning method. Experimental work is discussed under the appropriate method. (4) Augmentation and reduction of sex drive, which includes studies on the reduction effects of inanition and castration and the restoration effects of hormonal injections. (5) Intercorrelations, both among the various measures themselves and among these measures and other drives and interests. The bibliography contains 91 titles.—D. R. Riggs (Brown).

5140. Timmel, E. **Analyse der freihändigen Zielbewegung unter einfachsten und stufenweise erschwertem Bedingungen.** (Analysis of free-hand target movements under simple and progressively more complex conditions.) *Arch. ges. Psychol.*, 1938, 100, 501-539.—This is a contribution to the psychophysics of aiming and shooting. In it the author presents an extensive experimental analysis of the factors influencing the accuracy of hand-aimed firearms and the influence of their differing weights upon ability to hit a target at varying distances.—G. F. J. Lehner (Vermont).

5141. Tinklepaugh, O. L., & Mitchell, M. B. **Monthly and weekly weight cycles in women and their relations to behavioral and physiological functions.** *J. genet. Psychol.*, 1939, 54, 3-16.—Using as subjects 26 students, 14-21 yrs. old, and 2 teachers, all residents in a boarding school, weights were obtained daily (with few exceptions) for 20 weeks. Weekly and monthly cycles appeared, the latter correlated with menstrual cycles. Weekly curves, typically at a minimum on Saturday night, rose sharply on the week-end, to reach a maximum just prior to menstruation or at its onset, descended to a minimum at the close of the period or a few days later, subsequently rising gradually to the next maximum. Evidence of the operation of such cycles

in influencing behavioral and physiological functions is cited from other investigators and the interrelationship of the cycles and alterations in daily routines are discussed.—D. K. Spelt (Mississippi).

5142. Usnadze, D. **Untersuchungen zur Psychologie der Einstellung.** (Investigations on the psychology of disposition.) *Acta psychol.*, Hague, 1939, 4, 323-360.—Certain illusions, such as Fechner's "weight illusion," are not explicable on the theory of disappointed expectation, since they last too long. Some of them also get transferred to the other eye or hand. *Einstellung* is not so much motor attitude as general disposition, "a qualitative modification of the whole person, arising at a certain stage of the quantitative development of local processes." It has the following properties: incitability, strength, constancy, stability, plasticity, dynamics, and finally degree of irradiation. With schizophrenics it is unplastic and highly irradiating; with epileptics it is static but not transposable. No hysterical type is specifically indicated.—R. C. Givler (Tufts).

5143. Van Harreveld, A. **On galvanotropism and oscillotaxis in fish.** *J. exp. Biol.*, 1938, 15, 197-209.—This paper reports experiments on the galvanotropism and oscillotaxis of the goldfish (*Carassius auratus*) in homogeneous electric fields obtained by conducting regulated direct and alternating currents through a water trough by means of zinc electrodes as large as the ends of the trough. Galvanotropism is exhibited in the bending of a spinal fish with its concave side toward the anode in a DC field of transverse direction. This reaction, which persists for the duration of the current, is considered to be a reflex initiated in the periphery of the animal (possibly in receptors located in the muscles and tendons), since it is abolished by destruction of the spinal cord or by chemical narcosis. Experiments in support of this conclusion, and also exhibiting other manifestations of the reflex, are described. Galvanotropism was demonstrated in fish in which the labyrinths and lateral line organs had been eliminated by transection of their nerves. The mechanism of the response is considered to be based on the galvanotropic reflex and the animal's ability to swim. Oscillotaxis is exhibited in the curving of the body and tail of a fish placed at an angle of 45° to the lines of current in an AC field. This behavior is considered to be due to the wedge shape of the fish body and tail, by virtue of which the two sides of the animal form different angles with the current lines and are thus differently stimulated. The mechanism of oscillotaxis is discussed. 11 references.—C. K. Trueblood (Harvard).

5144. Weaver, H. E. **Syncopation: a study of musical rhythms.** *J. gen. Psychol.*, 1939, 20, 409-429.—The literature on the motor aspect of rhythm is briefly reviewed. Syncopation is "defined as the placing of accents upon parts of the measure which are normally unaccented." This requires, according to the motor theory, two movement processes. Finger movements in executing normal and syncopated measures and foot movements made in marking

time were recorded. 10 musicians made records in this way of 4 different rhythmic measures containing syncopical accents. Amplitude of each movement and the time of each measure were measured. Syncopical accents do not destroy the temporal stability of the rhythmic measure. Average time difference between the normal and syncopated measures varies slightly with the number of beats, with syncopical accents, and with tempo of execution. A syncopical accent increases the intensity of the adjacent time-keeping beat. The latter does not vary as much as the beats of the rhythmic figure. Constant patterns of intensities were not found in normal measures. For one syncopical device one pattern of intensities may characterize its performance by some musicians.—C. N. Cofer (Brown).

5145. Wezler, K., & Knebel, R. Zum zeitlichen Ablauf mechanisch und reflektorisch bedingter Änderungen der Kreislaufgrößen im Valsalvaschen Pressversuch. (The chronological course of the mechanically and reflexly conditioned changes in circulatory amplitude in Valsalva's pressure experiment.) *Z. Biol.*, 1939, 99, 355-371.—As to the reflex change in pulse frequency, it was found that at the beginning and end of the pressure the premises of physiological stimulation were present both for a reflex over the centripetal vagus of the lung and for a reflex over the pressor receptors of the carotid sinus. It was not clear, however, whether both acted simultaneously by summation, or whether only one was concerned. For the transition stage from the pressure experiment to the normal condition, there was a typical course of the separately registered amplitudes (deep inspiration).—P. L. Krieger (Leipzig).

5146. Wright, C. A. The sex offender's endocrinies. *Med. Rec.*, N. Y., 1939, 149, 399-402.—After commenting on his study of 178 girl sex offenders, the extent of endocrine pathology found in them, and the improvement effected by endocrine therapy, the author reports his findings on a group of 73 homosexuals (the youngest 6 years old), in whom he found evidence of endocrine irregularities as shown in the urine content of estrin, androkin, and gonadotropin. He also found that thyroid and pituitary disturbances were potent factors in sex irregularities, and he feels that homosexuality is best explained as an imbalance between male and female hormones. He feels that the treatment of sexual abnormalities by endocrine preparations, particularly testosterone propionate and estrin, will control delinquency and often rehabilitate the patient.—M. H. Erickson (Eloise Hospital).

5147. Wyss, W. H. v. Affektivität und vegetatives System. (Affectivity and the vegetative system.) *Klin. Wschr.*, 1937, 16, 409-414.—Recalling Max Scheler's division of the affective life into four levels of "Gefühle" (sensory affects, vital affects such as strength and weakness, fatigue, etc., spiritual affects such as joy, sadness, etc., and intellectual affects) the author shows that at all levels affectivity remains in a simple relationship with the vegetative system, with its roots in the vital needs

of the organism. As the works of Janet in particular show, it is the affective tonus, a function of the vegetative system, which regulates psychic activity, understanding by this the play of thoughts and of imagination, like the consciousness of strength or incapacity to think or act.—(Courtesy *Annals psychol.*).

[See also abstracts 4978, 4990, 5004, 5011, 5045, 5047, 5066, 5195, 5202, 5208, 5263, 5331, 5339, 5415, 5427.]

PSYCHOANALYSIS, DREAMS, HYPNOSIS

5148. Adams, E. T. A summary of some negative experiments. *J. Parapsychol.*, 1938, 2, 232-236.—Various unsuccessful ESP tests and the controls employed are described. Particular attention is devoted to the performance of a blind subject.—C. E. Stuart (Duke).

5149. Balint, A. Liebe zur Mutter und Mutterliebe. (Love for the mother and mother love.) *Int. Z. Psychoanal. & Imago*, 1939, 24, 33-48.—The child's attitude towards his mother during the pre-Oedipus stage is not really ambivalent, though death wishes frequently occur. The explanation is to be found in the naive egotism of the small child, who fails to distinguish between his own interest and that of the love object. Thus the little girl, wishing that her mother would quietly pass away so she could marry her father, in no sense hates her mother. Frequently children will become angry with indisposed parents, since indisposition makes it impossible for them to pay proper attention to their children. This attitude is often carried over into adult life, so that an otherwise altruistic person cannot conceive that his mother's interests might differ from his own. Conversely, a mother may refuse to admit that her children have grown up and become individuals with interests other than her own. This archaic relationship, based on naive egotism, is made possible by the biological interdependence of mother and infant. When this is destroyed at the end of the period of infancy, the child must learn to adjust himself to his mother, whose love he still needs but whose interests are no longer his own.—H. Beaumont (Kentucky).

5150. Crumbaugh, J. C. A questionnaire designed to determine the attitude of psychologists toward the field of extra-sensory perception. *J. Parapsychol.*, 1938, 2, 302-307.—This paper presents the results of a questionnaire which elicited responses from 100 representative American psychologists. The questionnaire concerned the attitude of the psychologists toward the research in extra-sensory perception, the *Journal of Parapsychology*, and the Zenith Foundation telepathy program. The results indicate that approximately 60% of the psychologists responding consider the ESP research of value whatever the results, and that the majority of psychologists are withholding judgment on the contemporary ESP studies. The answers are somewhat more unfavorable to the Zenith experiments. Over one fourth of

those answering, however, did not know of them. More than one third did not know of the *Journal of Parapsychology*.—C. E. Stuart (Duke).

5151. Curtius, O. **Grundsätzliche Fragen zur Traumassoziation.** (Basic questions concerning dream association.) *Zbl. ges. Neurol. Psychiat.*, 1938, 87, 712. Abstract.—P. L. Krieger (Leipzig).

5152. Deutsch, H. **Über bestimmte Widerstandsformen.** (Certain types of resistance.) *Int. Z. Psychoanal. & Imago*, 1939, 24, 10-20.—Resistance during the analytic process may take three different forms: intellectualizing, transferring, and remembering infantile material. The present paper deals with intellectualizing resistance, which consists of the patient's attempt to force his analysis into a certain direction and to replace the analytic experience either by an apparently positive "understanding" attitude, or by negative criticism. This characteristic occurs primarily among very intelligent people with real sublimation, compulsion neurotics who thus achieve desired isolation, and those with defective emotions who find the only possible outlet for their personality in this technique. Such an originally pure defense mechanism may become an inseparable characteristic of the patient's mental apparatus or remain a thin veil to cover his neurotic fears, which must be analytically destroyed before one can deal with the hidden traumatic materials.—H. Beaumont (Kentucky).

5153. Drake, R. M. **An unusual case of extra-sensory perception.** *J. Parapsychol.*, 1938, 2, 184-198.—An 11-year-old boy, physically retarded and with an IQ of 55, was found to repeat spontaneously words and numbers thought of by his mother but not overtly expressed. The boy responded with unusual accuracy when verbally urged by the mother. ESP cards were utilized with similar results. The words used by the mother to attract the child's attention were then limited in number, but high scoring continued (on one occasion an average of 21 correct hits per run for 14 runs was observed). Finally the child was induced to respond with a significant average of 7.6 per run to a mechanical "ready" signal operated by the experimenter without verbal urging by the mother. The accuracy of response to both verbal and mechanical signals declined rapidly toward the end of the study.—C. E. Stuart (Duke).

5154. Fenichel, O. **Zur Oekonomik der Pseudologia phantastica.** (The economy of pseudologia phantastica.) *Int. Z. Psychoanal. & Imago*, 1939, 24, 21-32.—As a result of the struggle between unpleasant experiences and the tendency to deny their reality, children frequently distort the truth in their imagination and play. This distortion, though affectively effective, is intellectually not acceptable to them. A parallel to this is the distorted memory of an experience modified only in respect to the traumatic element of the real situation. Thus they begin to distrust their own observations of events that "should not have happened" and to accuse themselves of imagining things that "never did happen." In this manner unpleasant events are

successfully repressed and explained as imaginary occurrences.—H. Beaumont (Kentucky).

5155. Fenichel, O. **Problems of psychoanalytic technique, Part III.** *Psychoanal. Quart.*, 1939, 8, 164-185.—This installment takes up the structural aspects of interpretation, specifically the extent to which the analyst works upon the ego, the id, and the super-ego. Essentially, the analyst works exclusively upon the ego, both directly and indirectly, and usually only through the ego is the id reached. Attempts to reach the id directly, however successful, require a subsequent approach through the ego for effective results. The author then takes up the problem of when and how to deal with both the id and the ego, the types of reaction-formation that may be expected from each, and the methods by which various defenses may be met. Next are discussed the specific factors in ego analysis. Analysis of the super-ego is essentially "an education of the ego to ever greater tolerance." The author then presents comments on the analysis of the transference and on the problems of counter-transference.—M. H. Erickson (Eloise Hospital).

5156. Freud, S. **Der Fortschritt in der Geistigkeit.** (Progress in spirituality.) *Int. Z. Psychoanal. & Imago*, 1939, 24, 6-9.—The history of the Jewish people shows that the concept of being subjugated to an omnipotent God raises a "chosen" people's ego. Furthermore, Moses' law against making images of his God was not merely a protection against magic abuses, but also a triumph of spirituality over sensuality and a subordination of sensory percepts to abstract concepts. Through this prohibition, Moses dematerialized his God and thus contributed to establishing in his people the respect for spiritual values which resulted in a continued emphasis upon cultural and mental activities in the Jewish race. Though they failed to achieve the nice balance of the Greeks, this characteristic served the Jews to resist the tendency toward violence which usually develops among those whose national ideal is muscular perfection.—H. Beaumont (Kentucky).

5157. Galant, J. S. **Beitrag zur Psychopathologie des Traumbildens.** (Contribution to the psychopathology of the dream life.) *Neopsichiatria*, 1937, 3, 1-6.—Dreams, according to Galant, must be separated into two classes, pathological (nightmares, hallucinatory representations of animals, due to toxic causes), and non-pathological. The greater part of the first probably have an erotic foundation, and the nightmares should essentially possess a sexual symbolism. The author places among the pathological dreams those which occur repeatedly. These have been termed "stereotypes" by de Sanctis; the author prefers the name "Zwangstraume." These should be met with most frequently among degenerates.—(Courtesy *Année psychol.*).

5158. Greenwood, J. A. **An empirical investigation of some sampling problems.** *J. Parapsychol.*, 1938, 2, 222-230.—Certain problems of sampling arising in ESP research are examined empirically on the basis of the results of the writer's large chance

check series. There is found the approximate revision of the critical ratio required to permit optional stopping, and the extreme critical ratio obtainable in the 20,000-run chance series. Empirical checks on the expectation of blocks of data of various lengths and given score totals are submitted.—C. E. Stuart (Duke).

5159. Hartmann, H. *Ich-Psychologie und Anpassungsproblem.* (Ego psychology and the problem of adjustment.) *Int. Z. Psychoanal. & Imago*, 1939, 24, 62-135.—The synthetic function of the human mind is a parallel to the biological correlation of organic parts, and is a phylogenetic instance of an intra-organic activity which at an earlier stage was an overt reaction to an external situation. The reality principle in a narrow sense does not necessarily follow from a modification of the pleasure principle, but presupposes a certain level of ego development. Ego development means differentiation by replacing and supplementing primitive instincts by characteristic behavior forms. In its adjustment the ego uses somatic and psychic apparatus, some of which (intelligence, perception, etc.) appears to have a constitutional origin. Adequate adjustment is represented by a nice balance between intrapsychic synthesis and differentiation, together with a realistic relationship to the outside world.—H. Beaumont (Kentucky).

5160. Katan, M. *Der psychotherapeutische Wert der Konstruktionen in der Analyse.* (The psychotherapeutic value of constructions in analysis.) *Int. Z. Psychoanal. & Imago*, 1939, 24, 172-176.—Events constructed and suggested by the analyst as a substitute for the patient's repressed traumatic experiences are useful in the therapeutic process. Sometimes patients attempt to recall such experiences, while others defend themselves strenuously against these suggestions. In either case much of the energy attached to these or similar events is thus released, so that their traumatic significance is reduced.—H. Beaumont (Kentucky).

5161. Kris, E. *Das Lachen als mimischer Vorgang.* (Laughter as an imitative process.) *Int. Z. Psychoanal. & Imago*, 1939, 24, 146-168.—Considered as a somatic process, laughter has a distinctive rhythm, brought about by the interference of the intercostal muscles with the expiration process, and involves the entire body. Whereas unrestrained, automatic, imitative laughter represents a regression by offering full expression to the id, smiling at the other extreme signifies the complete triumph of the ego. The physiological act of laughing can be modified into a suitable expression for a vast range of different emotions and attitudes, and only this directive function of the ego makes laughter human.—H. Beaumont (Kentucky).

5162. Leuba, C. *An experiment to test the role of chance in ESP research.* *J. Parapsychol.*, 2, 1938, 217-221.—In an experiment to study the frequency of "significant" deviations among chance data, the experimenter shuffled two decks of ESP cards and matched them 2682 times. The scores were recorded

on cards, each card being denoted a "subject." The number of runs for each "subject" was determined by the experimenter's judgment as the experiment progressed. The total average was 5.03 hits per run. Of 87 arbitrary "subjects" the total scores of 3 exceeded a 2.5 critical ratio, and 7 were found to have somewhere within the series 8 or more consecutive runs exceeding that critical ratio.—C. E. Stuart (Duke).

5163. Levey, H. B. *A critique of the theory of sublimation.* *Psychiatry*, 1939, 2, 239-270.—The author points out that the concept of sublimation has remained essentially static since its formulation in 1905, and then proceeds to a critical survey of the pertinent literature, dividing it according to periods, type, and schools of thought, summarizing and evaluating his findings for each section. Thus he examines Freud's original formulation of the concept in "Three Contributions to the Theory of Sex," published in 1905, Freud's writings to 1923, and then to 1938. The contributions, descriptive, clinical, and psychobiographical, of other psychoanalysts are next examined, and there follows an examination of the writings of those who have abandoned psychoanalysis and of those who have not used it, and the self-observations of geniuses. It is concluded that the concept is essentially an improved recapitulation of empirically known facts, that its neglect derives from the subjectivity associated with the problem, and that it needs to be reconstructed by the metapsychological measures and standards found useful in attacking other psychoanalytic problems.—M. H. Erickson (Eloise Hospital).

5164. MacFarland, J. D. *Discrimination shown between experimenters by subjects.* *J. Parapsychol.*, 1938, 2, 160-170.—5 selected subjects made 15,300 calls in two ESP test procedures. Each call was aimed at two target decks, several rooms away from the subject. The cards aimed at were handled by two experimenters, one of whom had been consistently "successful" in previous work, the other "unsuccessful." The previous levels of success continued in this dual experiment.—C. E. Stuart (Duke).

5165. Martin, D. R., & Stribic, F. P. *Studies in extra-sensory perception: II. An analysis of a second series of 25,000 trials.* *J. Parapsychol.*, 1938, 2, 287-295.—A series of 25,000 trials with a single subject under uniform conditions was carried out. The subject called up through a deck of 25 ESP cards screened from his sight. A highly significant average of 7.39 hits per run was obtained. Two controls gave chance results. Analysis revealed consistent daily scoring, greater frequency of consecutive hits in test than in control series, high positive correlation between card position and scoring success, and marked symbol preference without significant relation to scoring.—C. E. Stuart (Duke).

5166. Musatti, C. L. *La funzione del sogno.* (The function of the dream.) *Saggi Psicoanal. onore Freud*, 1937. Pp. 43.—Freud has considered the dream to be the guardian of sleep, but there are

some dreams which border upon the waking. This is because the dream is in reality a compromise between the will to sleep and the inclinations which appear to trouble sleep, a compromise requiring sacrifices on both sides. In the construction of the dream there is elaborated a system which permits associations to act only to that degree to which they may become integrated. An illustrative analysis is included.—(Courtesy *Année psychol.*)

5167. Nunberg, H. **Ichstärke und Ichschwäche.** (Strength and weakness of the ego.) *Int. Z. Psychoanal. & Imago*, 1939, 24, 49-61.—Strength of the ego is manifested in its ability to master and sublimate the drives of the id, and weakness of the ego is shown when, in dealing with these basic drives, it releases aggression which threatens the individual's existence by interfering with the libido. In final analysis, then, the matter depends upon the relative strength of the drives towards life and death.—H. Beaumont (Kentucky).

5168. Price, M. M. **A comparison of blind and seeing subjects in ESP tests.** *J. Parapsychol.*, 1938, 2, 273-286.—A group of blind subjects was compared with a corresponding group of seeing subjects for performance in ESP tests. The two groups were mainly boys resident in institutions, one a school for the blind, the other an orphanage. Similarity in choice of subjects, test conditions, and number of tests was approximated as far as possible. 66 blind and 40 seeing subjects were tested and a total of 52,975 trials were given, with an average of 5.61 hits per 25. The results as a whole were highly significant, giving a critical ratio of 14.06. The blind subjects gave slightly but fairly consistently higher average scores than the seeing. About one fourth of the runs were made with cards enclosed in sealed opaque envelopes; in both groups these gave significantly higher results than did the open cards. About one third of the total runs were made by the matching methods. These gave a slightly higher average score than with the calling procedure.—C. E. Stuart (Duke).

5169. Rhine, J. B. **ESP tests with enclosed cards.** *J. Parapsychol.*, 1938, 2, 199-221.—The writer reports 124,225 trials made in ESP tests in which the cards were enclosed in sealed opaque envelopes and boxes. About one-third of these tests were checked immediately as usual, and these gave a critical ratio of 13.5. About half of the total trials, however, were made with delay in checking, because of geographical distance, and these gave a negative critical ratio of 2.7. Delay in checking appears inhibitory. This decline effect appeared in 6 of the 7 test procedures used in the research. The comparison of enclosed card tests (immediately checked) with screened tests gave results in favor of the enclosed. A tentative hypothesis is suggested to account for the scoring below chance with the delayed checking and enclosed cards.—C. E. Stuart (Duke).

5170. Rhine, J. B. **Rothera experiments.** *J. Parapsychol.*, 1938, 2, 325-326.—Some previously unpublished ESP experiments, statistically signifi-

cant but open to alternative explanation, are reviewed briefly.—C. E. Stuart (Duke).

5171. Sarbin, T. R. **Rorschach patterns under hypnosis.** *Amer. J. Orthopsychiat.*, 1939, 9, 315-319.—The personality changes that occur during hypnosis were studied by means of the Rorschach method. One very suggestible subject was used. When the hypnotized subject was told she was M. Curie, 21 out of 40 Rorschach responses were scientific. When the hypnotized subject was told she was Mae West, 22 out of 33 responses were concerned with costume. When the subject was hypnotized and without further suggestion asked to interpret the ink blots, 15 out of 35 responses were associated with France (her ambition was to become an interpreter in the U.S. diplomatic service). In the control experiment not one response could be associated with science, with costume, or with France. It is thus shown that Aufgaben may serve as motivational systems under hypnosis.—R. E. Perl (New York City).

5172. Shulman, R. **An experiment in extra-sensory perception with sounds as stimuli.** *J. Parapsychol.*, 1938, 2, 321-325.—Sounds of the violin, clarinet, piano, cello, and singing voice were recorded upon acetate discs and presented in random series of 25. Subjects at a distance in another building attempted to guess the sounds presented. A control presentation of color cards was made. No significant deviation from chance was noted in the total scores of 20 subjects. It was noted, however, that the only subject scoring significantly positive on the color cards gave a significantly negative score on the sound stimuli.—C. E. Stuart (Duke).

5173. Stokvis, B. **Zur Psychologie des Suggestionsvorganges.** (The psychology of the suggestive process.) *Mscr. Psychiat. Neurol.*, 1938, 100, 237-240.—P. L. Krieger (Leipzig).

5174. Stuart, C. E. **The effect of rate of movement in card matching tests of extra-sensory perception.** *J. Parapsychol.*, 1938, 2, 171-183.—After their normal tapping rate was ascertained, subjects were instructed to match correctly unseen ESP symbols in time to the beat of a metronome. Two techniques, blind matching and screened touch matching, were used with 41 random subjects. When the metronome rate approximated the normal tempo, the subjects' scores averaged 5.67 per run. When the matching was done at rates other than the normal the average of successful hits per run was 4.96. The difference noted is highly significant, and due mainly to significant extra-chance scoring at the tempo rate. It is suggested that the difference in scoring level noted is due to distraction of attention from the primary task of matching when imposed non-tempo rates require effort to keep in time.—C. E. Stuart (Duke).

5175. Stuart, C. E. **A review of recent criticisms of ESP research.** *J. Parapsychol.*, 1938, 2, 308-321.—A summary of critical points raised, particularly with a view to their bearing upon the needs of the ESP investigation, is presented. The criticisms are

classified as attacks upon experimental methods, evaluative procedures, and concepts and implications of the research.—*C. E. Stuart* (Duke).

5176. [Various.] **The ESP symposium at the A.P.A.** *J. Parapsychol.*, 1938, 2, 247-272.—On Sept. 9, 1938, at the meeting of the American Psychological Association at Columbus, Ohio, a symposium was held on the subject "Methods in ESP Research," with John L. Kennedy as chairman. Six short papers were read, concentrating attention on three main issues of controversy over ESP: the methods of evaluation of results, exclusion of sensory cues, and the avoidance of errors in recording and handling the data. The speakers were Louis D. Goodfellow, T. N. E. Greville, H. O. Gulliksen, J. B. Rhine, John L. Kennedy, and Gardner Murphy. Following these papers the meeting was opened for general discussion. The substance of the papers and the discussion are given.—*C. E. Stuart* (Duke).

5177. **Waelder, R.** *Kriterien der Deutung.* (Criteria of interpretation.) *Int. Z. Psychoanal. & Imago*, 1939, 24, 136-145.—An hypothesis which seems to explain a series of experienced events is not acceptable as a psychological interpretation unless all possible conclusions that can be drawn from it are verifiable by facts other than the original event. Thus interpretation leads to new facts, and in the psychoanalytic process the application of known laws results in the formulation of new ones.—*H. Beaumont* (Kentucky).

5178. **Warner, L., & Clark, C. C.** *A survey of psychological opinion on ESP.* *J. Parapsychol.*, 1938, 2, 296-301.—A survey was made of the judgment of psychologists concerning the research in extra-sensory perception, covering the 603 full members of the American Psychological Association. 60% replied, indicating by a large majority (89%) their belief that a scientific investigation of ESP is legitimate. 76% included ESP research within the province of academic psychology. 39% approved, in general, the experimental approach as exemplified by the best work published in the *Journal of Parapsychology*.—*C. E. Stuart* (Duke).

5179. **Westerman-Holstijn, A. J.** *Grondbegrip der psychoanalyse.* (The basic concept of psychoanalysis.) Utrecht: Blijleveld, 1936. Pp. 231.—An introduction to psychoanalysis which emphasizes the biological aspects of psychic events and develops parallels between biological laws and those governing such phenomena as transfer, symbolism, etc. The relationships between delusions, dreams, mythology, and primitive religions are sketched in psychoanalytic terms. Throughout, the id is considered a relatively free agent capable of producing the unusual psychoanalytic phenomena independent of the ego.—*H. Beaumont* (Kentucky).

[See also abstracts 4948, 4967, 4976, 4977, 5214, 5379.]

FUNCTIONAL DISORDERS

5180. **Adell, G.** *Psychiatric examinations of certain male vagrants and alcoholics in Sweden in the*

year 1938. *Acta psychiat., Kh.*, 1938, 13, 447-462.—Presentation of the same material as in *Soc.-med. Tidskr.*, 1938, 15, 176-183 (see XIII: 1424).—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

5181. **Barry, H., Jr.** *A study of bereavement: an approach to problems in mental disease.* *Amer. J. Orthopsychiat.*, 1939, 9, 355-360.—A high incidence of maternal bereavements during childhood was found in 549 young psychotics, while the incidence of paternal bereavements was substantially the same as the median percentage of the normal control groups. The author feels that the method of contrasting maternal and paternal bereavements has sufficient theoretical importance to warrant more extensive application.—*R. E. Perl* (New York City).

5182. **Benon, R.** *La mélancolie.* (Melancholia.) Paris: Librairie Médicale Marcel Vigné, 1937. Pp. 206.—The author traces theories of melancholia from Hippocrates to Tastevin, and seeks to isolate true melancholia from other complications of both a physiogenic and a psychogenic nature. True melancholia is a psychogenic ailment characterized initially by a vivid and enduring chagrin which is caused by the obsessive idea of a past misfortune. This initial stage of rather long development is followed by an active delusion of culpability. The true melancholic blames himself severely for his real or fancied misfortune. Initial symptoms other than chagrin are epigastralgia, obsessive ideas, anxiety, seeking of isolation, asthenia, insomnia, headache, anorexia, constipation, emaciation. The subsequent delusion is composed of ideas of culpability, unworthiness, dishonor, ruin, imminent punishment, humility, possession, suicide. 60% of cases are curable. The most effective psychotherapy is not persuasion or suggestion, but a sympathetic listening which resembles the talking cure of Freud. In addition there is necessary some medical treatment of physical symptoms, partly to demonstrate one's sympathy and partly to prevent unfortunate consequences from insomnia and refusal to eat.—*F. C. Sumner* (Howard).

5183. **Berkman, M., Rappaport, E., & Sulzberger, B.** *Therapeutic effects of an authoritative situation in Children's Court.* *Amer. J. Orthopsychiat.*, 1939, 9, 347-355.—This paper aims to give conscious consideration to the factor of authority and to evaluate its therapeutic value in dealing with personality difficulties. The term authority is here used to imply a method whereby a standard norm of behavior is obtained primarily through the use of external pressure. Although the Children's Court attempts to act in the capacity of a socialized source which studies motives for misconduct rather than one which punitively represses symptoms, a court must of necessity have certain authoritative aspects. The writers describe some of the cases that have come before the court and conclude that an experience with an authoritative source, if properly evaluated prior to administration, may have definite therapeutic value.—*R. E. Perl* (New York City).

5184. Betzendahl, W. **Die Wahrnehmungsgrundlagen der Wahnbildung.** (The perceptual bases of delusions.) *Zbl. ges. Neurol. Psychiat.*, 1938, 87, 709.—The more or less rapidly accelerated change in personality structure is the basis of hallucinations in schizophrenia. In depressed states vital functions influence the general attitude of the patient. A readiness to accept nocturnal delusions and to dwell upon previous personality levels is typical of the senile psychoses.—P. L. Krieger (Leipzig).

5185. Binder, H. **Psychiatrische Untersuchungen über die Folgen der operativen Sterilisierung der Frau durch partielle Tubenresektion.** (Psychiatric investigations on the results of operative sterilization in the female by partial tube resection.) *Schweiz. Arch. Neurol. Psychiat.*, 1937, 40, No. 1/2. Pp. 77.

5186. Bond, E. D., & Braceland, F. Y. **Prognosis in mental disease.** *Amer. J. Psychiat.*, 1937, 94, 263-274.—A report based on patients in a private hospital, covering a period of five years. Of 171 cases of manic-depressive psychosis, 86 were cured, 19 were improved, and 30 showed no signs of amelioration; 24 died (12 by suicide), and the rest are unaccounted for. Of 116 cases of dementia praecox, 12 were cured, 25 showed some improvement, and 66 did not improve; 10 died, and 3 were not reported. Of 38 cases of general paresis, 13 were cured, 9 improved, 5 not improved, and 12 dead. Combining these figures with those of the psychoneuroses and the unclassified, the authors show 35% of cures, 18% of improved cases, 25% of no improvement (or regression), and 22% deaths.—F. W. Finger (Brown).

5187. Brander, T. **Zeigt die Oligophreniefrequenz jahreszeitliche Schwankungen?** (Does mental deficiency show seasonal trends in frequency?) *Acta paediat.*, Stockholm, 1938, 23, No. 2.—An investigation of the relation between month of birth and feeble-mindedness. The author finds no etiologic relationship between the two.—D. Shakow (Worcester State Hospital).

5188. Brown, J. F. **Reactions of psychiatric patients in a frustrating situation.** *Bull. Menninger Clin.*, 1939, 3, 44-64.—This paper reports the results of observing 163 psychiatric patients in a frustrating situation (a modification of Dembo's experiment) and comparing them with 20 control subjects in the same situation. The mode of observation is that of a controlled interview rather than a precise experiment. From these observations the author devises rating scales of varying objectivity and compares different psychiatric categories. Results indicate that diagnostic categories merely represent convenient points on some continuum such as regression or retreat from reality. The various psychiatric categories may be ordered with regard to deviation from the normal. This experimentally determined order corresponds to the psychoanalytical classification in terms of the depth of libidinal regression. The author develops the possibility of an approximate description of personality structure in the psychoses through the use of dynamic concepts (the ease of

building and discharging segregated tension systems, the level of aspiration and the effect of social pressure upon it). Suggestions toward improving the reliability and validity of the techniques are made.—W. A. Varvel (Kansas).

5189. Brugger, C. **Die Vererbung des Schwachsinn 1938.** (The inheritance of feeble-mindedness, 1938.) *Fortschr. Neurol. Psychiat.*, 1939, 11, 239-246.—The author limits his discussion to recent articles, mainly of biological import, as the publications on other phases are numerous. He discusses a number of studies of feeble-minded children and their parents, with reference to physical abnormalities, alcoholism, blindness, and reading and writing disturbances. Two short sections are devoted to mongolism and cretinism. Bibliography.—D. S. Oberlin (Delaware State Hospital).

5190. Buchanan, D. N. **Diseases of the nervous system.** *Proc. 3rd bienn. Mtg. Soc. Res. Child Develpm.*, 1939, 125-126.—Abstract.—R. C. Strassburger (St. Joseph's College).

5191. Casper, L. **Über den Erbgang der Schizophrenie und die Häufigkeit der schizophrenen Erb-anlage.** (The inheritance of schizophrenia and the frequency of hereditary schizophrenic tendency.) Erlangen: Palm & Enke, 1938. Pp. 30. RM. 1.20.—On the assumption of dominant-recessive inheritance, the author's equation yields the value 0.208 instead of the empirical value 0.215 (Luxenburger) or 0.175 (Kallmann). For reversion the author's value is 0.68 instead of Luxenburger's .7-.8. Assuming bi-recessive inheritance, the author obtains 0.126 instead of the empirical value 0.178 of Rüdin. In this case the reversion value is 0.53. In view of this discrepancy the assumption of bi-recessive inheritance is rejected in favor of dominant-recessive. The recessive factor occurs simply or doubled in 42% of all individuals and the dominant in 22%. No statement is possible, however, as to which of the two factors is specifically effective in the schizophrenic syndrome.—F. L. Krieger (Leipzig).

5192. Cohane, L. S., Harno, A. J., & Hogan, F. J. **Report of the Committee on Psychiatric Jurisprudence to the Section of Criminal Law, American Bar Association.** *Amer. J. med. Jurisprud.*, 1938, 1, 121-125.—A. Chapanis (Yale).

5193. Cohane, L. S. **Psychiatry and the criminal law.** *Amer. J. med. Jurisprud.*, 1938, 1, 152-156.—A. Chapanis (Yale).

5194. Conkey, H. C. **Psychological changes associated with head injuries.** *Arch. Psychol.*, N.Y., 1938, No. 232. Pp. 62.—The aim of the study was to obtain a quantitative measure of the effects of head injury. By measuring the performance of patients at intervals during the recovery period their recovery was demonstrated on a quantitative basis. A recovery curve in psychological functions was made; a battery of tests gave a quantitative measure of the psychological effects of head injury. Simple mental functions exhibited recovery earlier than more complex functions. Performance involving memory lagged behind other behavior. Results indicate that

one must distinguish between memory for new and for old material. The principal result seems to be loss of power to sustain attention; this is related to what Goldstein calls catastrophic behavior. Recovery of psychological processes lagged behind physical recovery and affected the performance of the patient after all apparent physical symptoms had disappeared. Impairment of the ability to perceive abstract relationships characterized the performance of the head-injury patient.—E. M. Achilles (Columbia).

5195. Darrow, C. W. Physiologic reaction mechanisms in psychotic and recovered patients. *Proc. 3rd bienn. Mtg Soc. Res. Child Develpm.*, 1939, 66-73. —Psychophysiological measurements of the galvanic skin reflex and of blood pressure reactions reveal quantitative differences between psychotics with poor insight and attention, and improved or recovered patients with better orientation. An interpretation of the physiologic phenomena after pharmacological treatment has induced improvement or recovery suggests increased sympathetic activity. The psychophysiological reactions offer a valuable source of objective data with which to supplement the psychiatric interview.—R. C. Strassburger (St. Joseph's College).

5196. Devereux, G. A sociological theory of schizophrenia. *Psychoanal. Rev.*, 1939, 26, 315-342. —Since incidence of schizophrenia in primitive societies is slight, it is suggested that difficulty of orientation in a culture causes functional disorders. The adjustment required of the primitive and civilized child is analyzed; it is shown that at no stage is the primitive apt to become disoriented, a situation very different from that in western civilization. And, it is stated, a strong current of disorientation in a changing environment is present in schizophrenic cases. "Schizoid mechanisms, the whole symptomatology of schizophrenia, can be understood as an individual or collective-primitive attempt to become adapted to a milieu in which one is disoriented, and as an attempt to neutralize the dysphoria resulting from disorientation." Schizophrenic symptoms are discussed in relation to this notion.—C. N. Cofer (Brown).

5197. Dröher, E. Erbiologische Erhebungen über ehemalige Chemnitzer Hilfsschüler der Geburtsjahre 1878 bis 1911. (Genetic biological studies of former pupils of special schools in Chemnitz born between 1878 and 1911.) *Arch. Rass.- u. Ges. Biol.*, 1939, 33, 10-37. —Among 576 former pupils of special schools in Chemnitz between the ages of 24 and 55, 459 are feeble-minded. This 80% includes 14% imbeciles and 3% idiots. Borderline cases account for 14% more, and only 6% of the entire group show no retardation. More than 75% of the fathers of these former pupils had been (usually unskilled) laborers, while 85% came from families of more than 4 children, the average number of children per family being 6.72. The probands produced an average of 3.87 children per fertile marriage, and 63% of the 315 children of probands

who could be examined were mentally or physically defective.—P. L. Krieger (Leipzig).

5198. Ephron, H. S. Moral judgment in therapy. *Amer. J. Orthopsychiat.*, 1939, 9, 339-347. —The author claims that a primary task in the treatment of neurotic patients is to rescue them from their compulsive moral goals, a task which can be done only by the active exposure of these goals. "Such exposure reveals the sources of the patient's anxieties, the defensive attitudes he adopts toward them, and seeks, by appealing to the best in the patient, to encourage change."—R. E. Perl (New York City).

5199. Frey, T. The electro-encephalogram in epilepsy. *Acta psychiat., Kbh.*, 1938, 13, 433-446. —The results of 30 cases examined electro-encephalographically at the Psychiatric Hospital, Stockholm. No correlation was found between the duration of the disease and the degree or type of the electro-encephalographic disturbances. Illustrations and brief bibliography.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5200. Frey, T. Om delirium acutum, s. k. dödlig katatoni och schizofreni. (Concerning delirium acutum, so-called fatal catatonia, and schizophrenia.) *Svenska Läkartidn.*, 1939, 36, 800-820. —A very extensive general discussion of the syndrome of delirium acutum, based upon rich case history material. Bibliography.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5201. Fromm, E. The social philosophy of "will therapy." *Psychiatry*, 1939, 2, 229-237. —In psychotherapy, fundamental concepts of aim and method depend upon religious, philosophical, political, and social opinions, with various aspects of human happiness, self-expression, inner freedom and activity, and adaptation and adjustment of the personality to a socially well-ordered life as goals. After discussion of these points, the author proceeds to a contrast of the philosophical principles underlying Rank's "will therapy" and the Freudian school, stressing particularly the differences in their social philosophies; the Freudian is essentially a compromise between human happiness and social adaptation, while the Rankian emphasizes "lifting man out of himself" (and thus not being himself), of resigning himself to a world belonging to the strong and choosing to believe that which he wishes, thereby altering reality in accord with individual needs. The author then points out the similarity of the Rankian doctrines to Fascist philosophy, and comments that the wide acceptance of Rankian principles by social workers may be accounted for by their dealing with clients whose reality situation socially and economically cannot be altered except by the application of the Rankian will to believe.—M. H. Erickson (Eloise Hospital).

5202. Gottlieb, J. Arm to carotid circulation time in abnormal mental states. *Arch. Neurol. Psychiat., Chicago*, 1939, 41, 1117-1126. —150 patients were studied under basal conditions. The mean circulation time was 18 seconds. A slowing of

the blood flow was noted in 11 arteriosclerotics and in 37 patients with manic-depressive psychosis. Slowing was present in patients with involutional melancholia, while those patients who had toxic and organic psychoses exhibited a significantly higher circulation time and a higher pulse rate. Gottlieb found no correlations, for the entire group or for any disease group, between circulation time and age, height, weight, length of illness, permeability quotient, spinal fluid protein, blood sugar, blood non-protein nitrogen, psychic tension, psychomotor activity, or contact with environment.—W. Marshall (Appleton Clinic, Wis.).

5203. Gould, R. Social factors in psychopathology. *Psychol. League J.*, 1939, 3, 53-58.—This is a critical review of two books dealing with the sociological background of mental disease. The books discussed are *Mental Disorders in Urban Areas*, by R. E. L. Faris and H. W. Dunham, and *Modern Society and Mental Disease*, by C. Landis and J. D. Page.—C. N. Cofer (Brown).

5204. Grante, P. Alkoholismus und Selbstmord. (Alcoholism and suicide.) *Allg. Z. Psychiat.*, 1939, 111, 47-62.—Alcohol very seldom causes normal individuals to commit suicide, but it seems to have that effect especially on those with epileptoid tendencies, who constitute 27% of the clinical cases.—P. L. Krieger (Leipzig).

5205. Gruhle, H. W. Der Einfluss des Alterns auf den Ablauf seelischer Störungen. (The influence of ageing on the course of mental disturbances.) *Z. Altersforsch.*, 1939, 1, 209-216.—Age factors affect differently the course taken by different mental disturbances, such as epilepsy, senile mania, melancholia, schizophrenia, hypochondria, etc.—P. L. Krieger (Leipzig).

5206. Hedenberg, S. Om psykologiska arbets-skyddsgärder inom industrien. (Concerning psychological protective measures in industry.) *Svenska Läkartidn.*, 1939, 36, 1004-1011.—From a psychiatric point of view the writer mentions the fact that patients released from mental hospitals have to go back to work, which most likely will cause recurrence of their ailment sooner or later. A survey is given of the psychotechnical measures and institutes in various countries, with a recommendation for the introduction of such protective measures also in Sweden.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5207. Hübner, K. Art und Verlauf von Psychosen nach dem Wochenbett. (The nature and course of puerperal psychoses.) Zeulenroda: Sporn, 1938. Pp. 19.

5208. Johnson, H. K. Gefühlsverlust als Krankheitssymptom. (The loss of feelings as a morbid symptom.) *Neue psychol. Stud.*, 1937, 13, 70-86.—Certain patients complain of their affective insensitivity, their incapacity to experience strong emotions; everything seems to them colorless, cold, indifferent. This is not characteristic of ordinary melancholics; these actually suffer, and their very

complaints demonstrate a certain reaction capacity. To understand the condition, it is necessary to consider the "totality" psychology of Krueger, in which feeling is the expression of the psychic totality. One must add to Wundt's dimensions another dimension of affective facts: richness-poverty. The poverty of which the patient complains results from a tendency toward dismemberment of the natural psychic unity.—(Courtesy *Année psychol.*).

5209. Jonsson, G. A psychiatric examination of female prostitutes in Sweden. *Acta psychiat., Kh.*, 1938, 13, 463-476.—The article presents the results of examinations and surveys made under the auspices of the Swedish State Medical Board by the writer and G. Adell. As much information as possible was collected and data were compiled on 54 prostitutes of the average age of 40, from some 300 sources—parents, teachers, hospitals, etc. 4/5 were found to be mentally deficient or diseased, 1/5 imbecile, 3/5 so-called psychopaths, 1/5 fairly normal. Age seemed to be no detriment for prostitution; the oldest, at 62, was still active. A table gives the psychiatric types found, and these are described. All cases were "social alcoholics." The suggested treatment consisted of placement in homes for imbeciles, alcoholics, and vagrants, and in mental hospitals.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5210. Kaila, M. Die traumatische Neurose und ihre Abhängigkeit vom Zeitgeist. (The traumatic neuroses and their dependence upon the spirit of our time.) *Acta psychiat., Kh.*, 1938, 13, 419-430.—Within a general discussion of traumatic neuroses, the writer maintains that the cardinal point of the origin of such neuroses is to be found in the fact that the patient makes an appeal to all humanitarian ideals and measures of our time through his nervous disturbances. He not only expects to get help but regards it as his subjective right to be helped at all times.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5211. Kalpa, K. Die neue Geisteskrankengesetzgebung Finnlands. (The new laws for the mentally diseased in Finland.) *Acta psychiat., Kh.*, 1938, 13, 619-629.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5212. Klaesi, J. Lebensalter und Wahnsform. (Age and forms of delusion.) *Zbl. ges. Neurol. Psychiat.*, 1938, 87, 265.—Certain forms of delusion occur at a certain age with considerable regularity. Youthful men and old maids are susceptible to delusions of suggestion, older people to delusions of being robbed and poverty-stricken. Children have no delusions because the prerequisites are lacking. Their feelings of inadequacy and unrealizable wish fantasies are still purely physiological, while wish fulfillment and contact are supplied by the environment. Delusions of being poisoned have different meanings at different age levels. Age also expresses itself clearly in differentiated dream symbolism.—P. L. Krieger (Leipzig).

5213. Kolb, L. Drug addiction as a public health problem. *Sci. Mon., N. Y.*, 1939, 48, 391-400.—O. P. Lester (Buffalo).

5214. Kubie, L. S. The experimental induction of neurotic reactions in man. *Yale J. Biol. Med.*, 1939, 11, 541-545.—The impossibility of translating the voice and behavior of animals into anything comparable to the symbolic language of man has limited the significance of efforts to produce experimental neuroses in laboratory animals. Whereas an "animal may be precipitated into a disturbed affective state by being forcibly confronted in the laboratory with problems which he cannot solve, a human being creates his own insoluble dilemmas by coming under the domination of unconscious conflicting ideas and impulses which he can neither resolve nor escape." The primary role of unconscious ideas in the production of human neurosis has been demonstrated in hypnosis experiments by experimentally implanting unconscious "memories" of deeply disturbing "experiences" and by giving hypnotic commands which bring the subject into sharp conflict with pre-existing prejudices or preferences. More recently it has been observed that emotional explosions can be produced and observed in the course of analysis by stirring up the specific ideational content which underlies the neurosis.—A. Chapanis (Yale).

5215. Lane, E. B., & Kinder, E. F. Relativism in the thinking of subnormal subjects as measured by certain of Piaget's tests. *J. genet. Psychol.*, 1939, 54, 107-118.—Piaget found that a series of 12 questions (6 dealing with brother-sister relations, 6 with right-left relations) distinguished several CA levels in terms of answer adequacy. This series was used with 50 Letchworth Village children, 25 of each sex. 4 groups of 10 cases each all had CA's approximating 16 yrs. and MA's of 6, 8, 10, and 12 yrs. respectively. A fifth group of 10 included CA's of 12 yrs. and MA's of 8 yrs. Performance on the total series improved with MA rather than with CA. Individual items differed in difficulty as measured by the level at which 70% of a group passed, the critical MA's corresponding approximately to Piaget's critical CA's.—D. K. Spell (Mississippi).

5216. Lang, J. The other side of the affective aspects of schizophrenia. *Psychiatry*, 1939, 2, 195-202.—Writing under a pseudonym, the author, 32 years of age with 3 years of college, widely read in psychology, has suffered from schizophrenia with paranoid and catatonic trends for 9½ years. In this article, the third of a series, he gives an account of his own affective experiences, discussing the general factors arousing affects in him and classifying and describing his affective responses in relationship to the various phenomena of his psychosis, particularly hallucinations, "thoughts-out-loud," hallucinatory pain, and religious experience, ecstasy, and martyrdom. He then offers an interpretation of these phenomena in terms of the hypothesis of "ideocentrism," the centralization of the personality around ideational processes, and of "psychic infec-

tion," the association of affects with hallucinations, possibly as a result of some foreign energy system intruding into the human organism and stimulating neuro-affective centers to produce the affect.—M. H. Erickson (Eloise Hospital).

5217. Langfeldt, G. Zur Frage der psychopathischen Zustände, ihrer Abgrenzung, ihrer Relation zu den Neurosen und Psychosen, sowie einige kritische Bemerkungen zu den verschiedenen Typenlehren. (Concerning the problem of psychopathic conditions, their definitions, their relation to the neuroses and psychoses, together with some critical remarks on the different type-theories.) *Acta Psychiat., Kbh.*, 1938, 13, 381-382.—Summary of critical remarks on the article by V. Mäkelä. The lecture is published in full in *Nord. med. Tidsskr.*, 1938, 16.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5218. Lemmergaard, K. E. J., & Ravn, J. Übersicht über die Patientenbelegung der Sicherungsanstalt für geisteskranke Verbrecher in Nyköping in der Zeit von 1918 bis 1938, unter besonderer Berücksichtigung der Psychopathien. (Survey of the patient load of the institution for safeguarding insane criminals in Nyköping for the period 1918-1938, with special reference to the psychopathies.) *Acta Psychiat., Kbh.*, 1938, 13, 431-432.—An account of 129 dangerous criminally insane in regard to kind of psychoses, kind of crime, etc.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5219. Lereboulet, P. [Mongolism and its treatment.] *Lattante*, 1937, 8, 248.

5220. Linnander, G. Sinnesjuklagen och den enskildes rättsskydd. (The new law on insanity and the legal protection of the individual.) *Soc.-med. Tidskr.*, 1939, 16, 58-64; 72-79.—A critical exposition of the new Swedish law of 1929 which came into effect January 1, 1939.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5221. Mäkelä, V. Über die Abgrenzung der Neurosen und ihre Einteilung in Untergruppen mit besonderer Berücksichtigung der Formen, die den endogenen Psychosen nahestehen. (Concerning the definition of the neuroses and their division into sub-groups, with special reference to the kinds that are nearly related to the endogenous psychoses.) *Acta Psychiat., Kbh.*, 1938, 13, 353-380.—A general critical treatise on definitions and classifications of mental diseases, as illustrated by case histories from the writer's practice.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5222. Masserman, J. H., & Balken, E. R. The psychoanalytic and psychiatric significance of phantasy. *Psychoanal. Rev.*, 1939, 26, 343-379.—50 mental patients "told a story" about 30 pictures. 10 of the pictures were shown to both sexes, 10 to males only, and 10 to females only. 3 typical case histories are given, and the fantasies of the 3 patients also are presented. The two sets of data were found to corroborate and supplement each other closely in indicating dynamic factors operating in these disordered persons.—C. N. Cofer (Brown).

5223. Meier, C. A. Über die Bedeutung des Jungschen Assoziationsexperiments für die Psychotherapie. (The significance of Jung's association experiments for psychotherapy.) *Zbl. ges. Neurol. Psychiat.*, 1938, 87, 703.—In the 30 years since the publication of the first papers of Jung, the methods of psychotherapy have been greatly improved (e.g., dream analysis). Today the association experiment is indicated, for therapeutic purposes, only under limited conditions: (1) to convince patients who deny the existence of the unconscious; (2) as a first approach to the unconscious in cases where there are no spontaneous manifestations of it; (3) in inhibited conditions; (4) in rigid schizophrenics; (5) in patients who find themselves unable to "confess." The association experiment is also of value for the description of typological differences between members of a family, i.e., for the description of the background.—P. L. Krieger (Leipzig).

5224. Menaker, E. A contribution to the study of the neurotic stealing symptom. *Amer. J. Orthopsychiat.*, 1939, 9, 368-379.—A summary of the findings in the cases of 12 boys presenting stealing as central symptom led the author to the conclusion that the unconscious content of the symptom is an attempt to retrieve from the mother those things of which she deprived the boy. One case is described in detail.—R. E. Perl (New York City).

5225. Mordhorst, G. Die Brauchbarkeit der Tests nach Bühler-Hetzer zur Ermittlung des Schwachsinnis bei vorschulpflichtigen Kindern. (The usefulness of the Bühler-Hetzer tests for the diagnosis of feeble-mindedness in preschool children.) Würzburg: Tritsch, 1939. Pp. 26.

5226. Morgan, C. T., & Morgan, J. D. Auditory induction of an abnormal pattern of behavior in rats. *J. comp. Psychol.*, 1939, 27, 505-508.—The writers found that an air blast, such as was used in Maier's experiment in order to force rats off the jumping platform, produced "neurotic" behavior like that described by him. Tactual stimulation from the blast could be eliminated. No discrimination problem was necessary in order to produce the behavior. "Whether or not Maier's results are actually independent of the discrimination situation which he used can not in fairness be concluded until a detailed account of his work is available. In all probability the discrimination situation would contribute some modification of conditions eliciting the behavior if only to condition the reaction to the stimuli of the situation. It is certain in our case, however, that the abnormal behavior is correlated directly with the auditory component of the air blast." It is questioned whether the behavior observed by Maier and duplicated in the present study can be correctly designated as neurotic. The final stages are "more closely allied to catatonia and the phenomena of tonic immobility."—N. L. Munn (Vanderbilt).

5227. Myerson, A. Legal phases of psychiatry. *Amer. J. med. Jurisprud.*, 1938, 1, 73-78.—A. Chapanis (Yale).

5228. Niceforo, A. Che cosa è l'uomo "normale"? A proposito di antropologia criminale e della per-

sonalità del delinquente. (What is the normal man? Criminal anthropology and the delinquent personality.) Città di Castello: tip. Leonardo da Vinci, 1938. Pp. 61.—Normal man is defined not in terms of the arithmetic mean but rather of the range between the first and third quartiles, or better still of that between plus and minus two-thirds of the standard deviation.—H. E. Burtt (Ohio State).

5229. Nörvig, J. Om svagt begåvade barns och ungdoms fostran. (Concerning the training of mentally inferior children and adolescents.) *Soc.-med. Tidskr.*, 1939, 16, 91-97.—A general treatise on progress in the care and training of feeble-minded and mentally inferior children in Denmark. Two new institutions have been established and a committee is working with the problem of diagnosis and care of psychopathic children.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5230. Nylander, G. Versuche über die Behandlung sog. psychopathischer Zustände bei Kindern. (Experiments in the treatment of so-called psychopathic conditions in children.) *Acta Psychiat., Kh.*, 1938, 13, 481-500.—An account of the work of a Mental Hygiene Pedagogical Institute in Stockholm, which has existed for 4 years. 57 children of ages 5-15, referred for any difficulties needing psychiatric help, were examined. Tables concerning reasons for commitment, home conditions, therapeutic results of treatment, etc., are given.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5231. Penrose, L. S. Eugenic prognosis with respect to mental deficiency. *Eugen. Rev.*, 1939, 31, 35-37.—Based upon data of sibships of afflicted individuals born of normal parents, the probability of recurrence of the defect or disease among the siblings is as follows: for undiagnosed type imbeciles or idiots, 2.7%, with 90.1% normal and the balance of intermediate grades of intelligence. For the mongolian type, the chance that a second imbecile or idiot will be born drops to 1 in 50. When parents are consanguineous, the probability that an unclassified clinical-type idiot or imbecile will occur again is raised to 1 in 7. When the imbecility is definitely diagnosed as of recessive origin, the expectation goes up to 1 in 4, which is the expectation also for families which have already produced two imbeciles. A table is included of expectations of imbecile offspring to parents who are themselves below average intelligence. The grade "simpleton" is introduced, an old English term equivalent, apparently, to the American term "moron."—G. C. Schwesinger (American Museum of Natural History).

5232. Pollock, H. M., Malzberg, B., & Fuller, R. G. Hereditary and environmental factors in the causation of manic-depressive psychoses and dementia praecox. Utica, N. Y.: State Hospitals Press, 1939. Pp. 473. \$2.50.—These investigators review the studies of the inheritance of mental disease, compare the incidence of disorder among the families (especially siblings) of 155 manic-depressive

probands and of 175 dementia praecox probands with the incidence in the general population, and summarize the environmental history of each of the probands. They find a higher incidence of disorder among the families of both groups of patients than would be expected from the incidence in the general population. The relative frequency of mental disorders increased among the siblings of the probands when there was mental tainting among the parents. Mendelian ratios failed completely to fit the data for either of these two disorders. A large percentage of schizophrenics are shown to have exhibited well-marked seclusive traits before the onset of the psychosis, and such pre-psychotic personality trends as seclusiveness, depressiveness, instability, and overactivity were found among the manic-depressive patients. No essential differences were found among the immediate exciting factors, which suggests that the type of mental disease depends primarily upon the nature of the organism.—J. McV. Hunt (Brown).

5233. Reider, N. The reaction of psychiatric patients to physical and neurological examinations. *Bull. Menninger Clin.*, 1939, 3, 73-81.—"The thesis is brought forward in this paper that the general reactions of the patient to physical and neurological examinations, his spontaneous remarks, his responses to questions, and gestures have a particular psychological significance and can be integrated with the personality study made by formal and traditional methods. The reaction of the patient to such examinations is dependent upon the degree of his acceptance of the 'situation of being examined,' and his already established defenses against anxiety. Various types of reaction are presented and their significance, especially in relation to dynamic mechanisms, is discussed."—W. A. Varvel (Kansas).

5234. Rinkel, M. Mental disorders in the course of bullet wounds: their medico-legal relationship. *Amer. J. med. Jurisprud.*, 1938, 1, 157-164; 1939, 2, 49-51.—"Mental disorders in the course of bullet wounds of the brain are discussed and the importance of physical-neurological examination is emphasized, including psychological-experimental tests, x-ray, and encephalographic, electrical (brain-waves) and serological methods. Bullet wounds of the brain, as well as any traumatic brain injury, lead to encephalopathia traumatica with its neurological and mental symptoms. This terminology is discussed as a suitable basis for expert opinion. Increased suggestibility, disturbances of emotion, and intolerance for alcohol are specific disorders in cases of brain injury and are of importance in their medico-legal relationship. Certain situations, namely, responsibility in crime, marriage and divorce, and testamentary capacity are discussed according to the recent formulations of the corresponding German laws." Bibliography.—A. Chapanis (Yale).

5235. Robinson, G. C. The patient as a person. New York: Commonwealth Fund, 1939. Pp. xiv + 423. \$3.00.—This book reports a study by the case history method of 174 general medical

patients in relation to their individual social situation as determined by interviews, medical history, home visits, and data from other sources, and of the general psychotherapeutic measures employed with them and the results obtained. Chapter I discusses the essential unity of the psychic and somatic elements of illness; the next presents the method of case study, together with the classification and frequency of the various types of illnesses and the varying social situations. The next 6 chapters take up patients having various types of physical illness (circulatory, respiratory, digestive, etc.), presenting the medical and social aspects of each individual patient together with comments on the handling and outcome of the total situation. The 9th chapter is a general summary of the problem of treating the patient as a whole, and emphasizes the necessity for appreciating the importance of social considerations in direct relationship to the physical incapacity. A bibliography and index are appended.—M. H. Erickson (Eloise Hospital).

5236. Schaedler, E. Eine Untersuchung über die Nachfahren von Manisch-Depressiven. (A study on the descendants of manic-depressives.) Würzburg: Roll, 1938. Pp. 17.

5237. Schilder, P. Health as a psychic experience. *Arch. Neurol. Psychiat.*, Chicago, 1937, 37, 1322-1337.—The organic maladies can coexist with a psychic experience of good health, for they are at the periphery of the personality. Psychogenic disorders, at the center of the personality, permit much less of an objective attitude; through lack of interest troubles are minimized. By taking refuge in infantile states of psychic regression, the patients can escape from their illness. The writer insists on a close relation between organic lesions and psychogenic processes; he envisages the zone of Wernicke as playing an important role in the maintained experience of good health. With the exception of incurable cases, it is believed that for best treatment the patient should be made conscious of the nature of the illness.—F. W. Finger (Brown).

5238. Schilder, P. The psychology of schizophrenia. *Psychoanal. Rev.*, 1939, 26, 380-398.—"The schizophrenic threatened in early childhood withdraws into positions more secure. He tries to heighten the importance of the strength of his own personality. Furthermore, he uses primitive methods of defense either by giving in, immobility and catalepsy, or negativism. He may also use the technique of violent attack. He does not dare retain higher forms of object relations. Primitive types of libidinous development occur. In addition to that we find primitive stages of ego-ideal development. The primitive attitude also appears in the formation of language and thought processes. Symbolism, projection, and renewed identifications belong in this sphere. The primitive threat is revived by dangerous situations of everyday life. The threat of being destroyed leads to outbursts of aggressiveness which appear particularly clearly in the schizophrenia of children. Many of these

manifestations of primitive motor defense and obedience have close relations to organic brain mechanisms . . . disturbed in a sphere which is not the same as in gross lesions of the brain." Insulin and metrazol shock cause a physiological reorganization which, in turn, leads to a reorganization of attitudes.—C. N. Cofer (Brown).

5239. Schneider, K. **Psychischer Befund und psychiatische Diagnose.** (Psychic findings and psychiatric diagnosis.) Leipzig: G. Thieme, 1939. Pp. 27. RM. 1.40.

5240. Schorsch, G. **Die Ausdruckskunde in der psychiatrischen Diagnostik.** (The study of expression in psychiatric diagnosis.) *Zbl. ges. Neurol. Psychiat.*, 1938, 87, 705.—Expressive movements are the most significant source of information concerning the mental life of others. In the handwriting of mental patients the individual's reaction to his biological processes is expressed. Graphological analysis is extremely important in investigating premorbid personality structure.—P. L. Krieger (Leipzig).

5241. Schou, H. **Laboratory and catamnestic investigations into the so-called neuroses.** *Acta Psychiat.*, Kh., 1938, 13, 383-398.—Discussion of statistical material from Dianalund Sanatorium, Denmark's first hospital for nervous patients only, i.e., those with functional neuroses. In the period 1928-37, 5905 patients were admitted, interpreted as "neurotics" by general practitioners. Diagnosis, however, showed that the actual ailments were: mental disorders 53%, medical and surgical disorders 18%, functional neuroses 15%, organic nervous disorders 12%, and abusus stimulantia 2%. These groups are discussed and it is suggested that "To us, the psychiatrists, the milder psychoses must be a main task in the future and it would be desirable if, from this Scandinavian meeting, an opinion could be expressed in support of the endeavors just now being made in the different countries in order to establish wards, respectively hospitals or sanatoriums for these disorders." Tables and graphs.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5242. Schou, H., Kalpa, K., & Saethre, H. **Die psychiatrische Entwicklung in den nordischen Ländern.** (Psychiatric development in the northern countries.) *Acta Psychiat.*, Kh., 1938, 13, 339-351.—The three authors individually report progress along various psychiatric lines in Norway, Sweden, and Denmark in regard to new laws and various other measures of improvement.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5243. Seevers, M. H. **Drug addiction problems.** *Sigma Xi Quart.*, 1939, 27, 91-102.—R. R. Wiloughby (Brown).

5244. Sjöhagen, A. **Alkoholismen som samhällsproblem.** (Alcoholism as a problem of society.) *Soc.-med. Tidskr.*, 1939, 16, 37-45.—A general treatise on the subject, with principal emphasis on the need for basic changes in our social structures, more social security, etc., as conditions and founda-

tions for preventive work.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5245. Stauder, K. H. **Konstitution und Wesensänderung der Epileptiker.** (Constitution and character changes in epileptics.) Leipzig: Thieme, 1938. Pp. 196. RM 10.50.—The Rorschach method clearly demonstrates the constitution and character changes typical of congenital epilepsy, but not those in cases of a definitely exogenous nature.—P. L. Krieger (Leipzig).

5246. Störring, G. E. **Wesen und Bedeutung des Symptoms der Ratlosigkeit bei psychischen Erkrankungen.** (Nature and significance of the symptom of helplessness in mental disease.) Leipzig: G. Thieme, 1939. Pp. 71.

5247. Strauss, A. A. **Effects of exogenous and endogenous factors in the organism as a whole in mentally deficient children.** *Proc. 3rd bienn. Mtg Soc. Res. Child Developm.*, 1939, 93-95.—A comparative study of mental and physical growth in two matched groups of 10-12-year-old children having exogenous and endogenous forms of mental deficiency. Statistically significant differences in the relation of height age to chronological age and to mental age are found to exist between the groups: in the endogenous cases, the curve of growth in height lies equidistant from both chronological age and mental age, while in the exogenous group the curve for growth in height is nearer to the chronological age and farther from the mental age. This suggests that an organic lesion which produces a mental retardation causes a split in the integrative mental and corporal growth, manifestation of which is further evident in the characteristic misbehavior of the exogenous group.—R. C. Strassburger (St. Joseph's College).

5248. Tómasson, H. **Further investigations on manic-depressive psychosis.** *Acta Psychiat.*, Kh., 1938, 13, 517-526.—From 1928 to 1936 the author was the only practicing neuropsychiatrist in Iceland, and was consulted in this period by 5116 persons between the ages of 15 and 70, 14% of whom were manic-depressive patients. The expectancy of mental diseases has been calculated. The incidence of neuropsychiatric morbidity in general or of manic-depressive morbidity in particular, among the relatives of manic patients, does not exceed the average for the whole population. Further publications are to appear.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5249. Torres, J. **Catatonia e hipoglucemia provocada.** (Catatonia and artificial hypoglycemia.) *Arch. bras. Med.*, 1938, 28, 315-330.—When white rats are injected with insulin followed by bulbo-capnine, they become more resistant to the latter, and hence to catalepsy.—M. E. Morse (Baltimore).

5250. Town, C. H. **Familial feeble-mindedness: A study of one hundred and forty-one families.** Buffalo: Foster & Stewart, 1939. Pp. 97. \$2.00.—Without consideration of the cause, the author presents the problem of the concentration of feeble-mindedness in families, through a study of 141

families known to the Psychological Clinic of the Children's Aid Society of Buffalo, each with two or more feeble-minded members. The studies were not exhaustive, but included at least one person of each family; reports of feeble-mindedness are based always on competent diagnosis. Descriptive data are presented regarding each family, detailing status in family, sex, mental diagnosis where available, and additional information on apparent normality or abnormality, speech defect, delinquency, truancy, sexual aberrations, etc. The total number of persons in the families was 1384, for 578 of whom mental diagnoses were available. Of these 398 were feeble-minded, while 180 were diagnosed as "normal, borderline or retarded." It is found "that these families, selected because they are foci of feeble-mindedness, are also foci of disease, alcoholism, destitution, criminality and vice." A program is briefly suggested of sheltered workshops for the feeble-minded, providing a permanent workshop which will use their abilities and not force "empty, idle life in the community."—L. J. Stone (Vassar).

5251. Wigert, V. *Enzephalographische Befunde bei sog. "Psychoneurosen."* (Encephalographic findings in so-called "psychoneuroses.") *Acta psychiat., Kbh.*, 1938, 13, 401-418.—130 cases of "psychoneurosis" were encephalographically examined at Stockholm Psychiatric Clinic with the general suggestive result that gross organic brain lesions are frequent in "constitutional psychopathic inferiority" cases. Illustrated by case histories and reproduced encephalograms.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5252. Wittermann, E. *Über den Ausgang frühkindlicher Krampfkrankheiten und ihre Beeinflussung durch Röntgenstrahlen.* (The outcome of childhood convulsions and their treatment by Rontgen rays.) *Z. Kinderheilk.*, 1938, 60, 9-29.—The possibility of mitigating the mental and physical results of infantile convulsions depends on a number of factors and particularly upon the nature of the conditions giving rise to the attacks. Generally speaking, the treatment is most likely to be helpful if there are neurological signs pointing to an organic basis such as birth injury, and if the treatment is begun at an early age. Prognosis is least favorable in those cases showing early signs of mental backwardness.—F. L. Goodenough (Minnesota).

[See also abstracts 4992, 5011, 5074, 5099, 5326, 5333, 5334, 5340, 5343, 5345, 5359, 5370, 5379, 5385, 5393, 5404, 5408, 5423, 5425.]

PERSONALITY AND CHARACTER

5253. Bachem, M. *Stammtafel einer Familie mit zahlreichen Idiosynkrasien.* (Pedigree chart of a family with numerous idiosyncrasies.) Würzburg: Triltsch, 1938. Pp. 13.

5254. Ferrio, C. *Sul concetto di personalità.* (The concept of personality.) *Arch. ital. Psicol.*, 1938, 16, 16-36.—There has been a recent shift in the concept of personality from the totality of psychic

functions to the functions of the instinctive and affective life, exclusive of intellectual factors. It seems to be psychologically, anatomically, and clinically right to say that subcortical functions are primarily responsible for overt behavior, hence there is justification for this restriction of the concept. This leaves the problem of determining whether higher psychic functions show the same individual differences as the others. There seems to be evidence that they are somewhat more homogeneous.—H. Beaumont (Kentucky).

5255. Gottschaldt, K. *Erbe und Umwelt in der Entwicklung der geistigen Persönlichkeit.* (Hereditity and environment in the development of mental personality.) *Z. Morph. Anthropol.*, 1939, 38, 10-17.—The concrete mental personality is the result of maturation and differentiation of inherited structure within the frame of the environment. But the individual is not passively receptive during this process, since his formation is inherent in his hereditary structure.—P. L. Krieger (Leipzig).

5256. Hertz, M. R., & Rubenstein, B. B. *A comparison of three "blind" Rorschach analyses.* *Amer. J. Orthopsychiat.*, 1939, 9, 295-315.—The authors were interested in the problems of the reliability and validity of Rorschach interpretations. They claim that the ultimate test of the method is the comparison of "blind" analyses, that is, interpretations of Rorschach records alone, knowing only the sex and approximate age of the subject. They compared 2 "blind" and one partially "blind" analysis prepared from one Rorschach record by 3 experienced examiners, and found extremely high agreement. Similarly, a comparison of these analyses with other clinical data showed that the Rorschach method has a high degree of diagnostic validity.—R. E. Perl (New York City).

5257. Hunter, M. *The practical value of the Rorschach test in a psychological clinic.* *Amer. J. Orthopsychiat.*, 1939, 9, 287-295.—Intelligence as estimated from Rorschach tests was compared with intelligence as estimated by teachers, by means of Binet IQ's, with Porteus Maze quotients, and by means of an average of these last 2 items. Personality sketches prepared from the Rorschach records by the psychologist were compared with personality sketches prepared by teachers. The subjects for this experiment were 50 pupils from a private school. The author found that the Rorschach indicates general all-round level of functioning somewhat better than either Binet or Maze tests alone. It also seems capable of bringing to light emotional conflicts which do not always appear in response to other tests.—R. E. Perl (New York City).

5258. Kamiat, A. H. *Social forces in personality stunting.* Cambridge, Mass.: Sci-Art Publishers, 1939. Pp. 256. \$2.50.—The author contends that most physical adults of which history has record have been intellectually, emotionally, and volitionally immature. A mature person is defined as one whose approach to problems is rational and

objective, whose dominant affects are sympathetic and benign, and who is able to socialize his impulses. The cause of widespread psychological immaturity is said to lie in the fact that human society has always been essentially exploitative, autocratic, and competitive in structure and spirit. Hope lies in the attainment of a higher level of subsistence which is primarily democratic and co-operative in character.—D. G. Ryans (William Woods College).

5259. Koens, A. J. *Schoonmaak en psychologie.* (House-cleaning and psychology.) *Mensch en Maatsch.*, 1939, 15, 214-219.—The house-cleaning urge is in the nature of a compulsion neurosis which has an unconscious origin, releases hidden reservoirs of energy, and is not susceptible to reasoning. Especially prone to succumb are women who depend upon their emotions more than upon their reason for guidance of their activities. In general, house-cleaning offers a perverse but socially acceptable outlet for repressed energies, which is especially desirable when spring causes increased hormonic activity. Women who are less repressed in finding normal affective outlets fall prey to house-cleaning neurosis less frequently than those with pent-up emotions.—H. Beaumont (Kentucky).

5260. Kroh, O. *Zur Absicht und Methode unserer typenkundlichen Arbeiten.* (Concerning the purpose and method of typological research.) *Z. Psychol.*, 1938, 143, 202-211.—The author presents this discussion of typological work, its origin and development, and the classifications (types) which have evolved, as an introduction to the work of A. Löw, "Association and Recognition from the Typological Point of View."—G. F. J. Lehner (Vermont).

5261. Mitrano, A. J. *Preliminary construction of a schedule of emotional stability for children.* *Amer. J. Orthopsychiat.*, 1939, 9, 360-368.—This is a report of the preliminary work that has been done in devising a schedule to measure emotional stability in children.—R. E. Perl (New York City).

5262. Pires, N. *Estudo de um tipo de cidade—o malandro.* (Study of a city type—the loafer.) *Neurobiología, Pernambuco*, 1938, 1, 47-59.—A psychological study of the loafer, who is the spiritual relative of the "Apache." He has been unable to free himself from infantile fixations and is shipwrecked on the Oedipus complex.—M. E. Morse (Baltimore).

5263. Rasmussen, E. W. *Wildness in rats.* *Acta psychol., Hague*, 1939, 4, 295-304.—The offspring of wild gray rats remain wild and shy when raised by their own mother, but tame white rats reared by a wild gray mother will remain shy only as long as they stay with her, and after weaning the shyness gradually disappears. Hybrids of gray wild father and albino mother seem to become wilder the longer they stay in a cage with wild rats. Apparently, the larger the cage, the more pronounced the wildness.—R. C. Givler (Tufts).

5264. Ryans, D. G. *"Persistence" test scores of students compared with respect to the nativity of*

the male parent. *J. genet. Psychol.*, 1939, 54, 223-227.—When 442 high school and junior college students, grouped according to place of paternal nativity, took a "persistence" test, Finnish, American, Norwegian, Serbian, and Austrian groups made high scores; Croatian, Slovenian, and Irish groups scored substantially lower. Most of the differences are statistically insignificant.—D. K. Spelt (Mississippi).

5265. Ryans, D. G. *A tentative statement of the relation of persistence test scores to certain personality traits as measured by the Bernreuter inventory.* *J. genet. Psychol.*, 1939, 54, 229-234.—When the persistence test scores of 40 junior college sophomores were correlated with Bernreuter scores, the resulting r 's ranged from -0.01 to -0.07. Differences in Bernreuter scores between the highest and lowest fourths of the persistence distribution were mostly insignificant statistically.—D. K. Spelt (Mississippi).

5266. Rylander, G. *Personality changes after operations on the frontal lobes.* *Acta Psychiat. Kh.*, 1939, Suppl. 20. Pp. 327.—32 patients were examined after partial excisions of their frontal lobes performed because of a tumor or abscess. The following changes were found by comparison between mental condition at the time of the follow-up examination and before the onset of the illness: (1) Emotional changes occurred in 30 cases. These changes were revealed in a diminished inhibition of affective responses in 25 cases, and in a displacement of the habitual feeling level in 28 cases, in 20 toward euphoria and in 8 toward depression. (2) Changes in volitional and psychomotor activity occurred in 22 cases; 14 patients showed restlessness and 12 deterioration of initiative and interest, the symptoms sometimes appearing together. (3) Intellectual changes, mainly involving the higher mental processes, occurred in 21 cases. Specially selected mental tests were given to all the patients and a control series of 32 non-operated persons. Statistical treatment of the results given shows the existence of significant differences between the two series, the operated subjects doing more poorly on the tests requiring the use of the higher intellectual functions. In standardized intelligence tests, the operated series gave results which were significantly lower than those of the control series. All these changes may be called changes in personality. Illustrations, tables, extensive bibliography.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5267. Singer, H. D. *Endowment with energy as a factor in personality.* *Proc. 3rd bienn. Mtg. Soc. Res. Child Develpm.*, 1939, 65-66.—Quantitative endowment with energy and its proper integration through the autonomic nervous system are fundamental factors in human adjustment. The life history of the patient provides a source of information respecting the quantity and quality of the energy habitually displayed. Clinical examples of deficiency and overabundance of endowment with energy are available.—R. C. Strassburger (St. Joseph's College).

5268. **Vetter, A.** *Angewandte Charakterkunde.* (Applied characterology.) *Z. angew. Psychol.*, 1939, 56, 125-128.—The author presents a brief introduction, largely historical and systematic, to the work of Maria Ihms, "Characterological investigations of imprisoned women."—*G. F. J. Lehner* (Vermont).

5269. **Wartegg, E.** *Gestaltung und Charakter.* (Organization and character.) *Beih. Z. angew. Psychol.*, No. 84, 1939. Pp. x + 261.—Subtitle: Interpretation of drawn forms and development of a characterological typology. The author presented 128 subjects, 17-70 years of age, with an incomplete drawing which they were asked to finish. The results were analyzed from the point of view of Gestalt psychology, of psychological anthropology, and of systematic characterology, in an effort to obtain a unified picture of the individual's organization (*Gestaltung*) as manifested in these drawings. Characteristics of feeling-tone, fantasy, intelligence (understanding), will, etc., are described in detail and are believed to show a consistency indicative of a characterological typology. A 31-page supplement is attached showing several hundred drawings with a short analysis of each.—*G. F. J. Lehner* (Vermont).

5270. **Wauthier, Mlle., & Martin, Mlle.** *Le "conte" comme test psychologique affectif.* (The tale as a psychological test of affectivity.) *Arch. belges Sci. Educ.*, 1936, 2, 96-114.—Employing a well chosen tale, the authors by means of appropriate questions have explored the affectivity and personality of their subjects. Both children and adults were tested. Imagination seems to be an innate gift the development of which may be very marked in certain young children and completely lacking in certain cultivated adults. The authors affirm that through constraint, through exaggeration in the obligatory acquisition of verbal information, and through lack of interest the imagination may be stifled.—(Courtesy *Année psychol.*).

[See also abstracts 5078, 5171, 5183, 5188, 5245, 5272, 5286, 5294, 5335, 5372, 5416, 5423, 5424.]

GENERAL SOCIAL PROCESSES

(incl. Esthetics)

5271. **Adam, A.** *Der Primat der Liebe. Eine Untersuchung über die Einordnung der Sexualmoral in den Sittengesetz.* (The primacy of love. An investigation on the incorporation of sexual ethics into the morality laws.) (3rd ed.) Kevelaer: Butzon & Bercker, 1939. Pp. 256. RM. 3.50.

5272. **Adams, W. A.** *Methods for the study of personality in negro society: Part 2. Psychological aspects of the orientation of negro children.* *Proc. 3rd bienn. Mtg Soc. Res. Child Developm.*, 1939, 34-46.—A psychological analysis of an individual assigned to a particular negro personality type. The nature of the social adjustment effected is related to the several causative factors. There is appended a discussion of the values influencing adjustment in the negro society, and of the mechanisms whereby

orientation is accomplished.—*R. C. Strassburger* (St. Joseph's College).

5273. **Ainsworth, S.** *Studies in the psychology of stuttering: XII. Emphatic breathing of auditors while listening to stuttering speech.* *J. Speech Disorders*, 1939, 4, 149-156.—When non-stutterers listen to the speech of stutterers there is an increase in the coefficient of variability of the expiratory and the inspiratory phases of their breathing. This increase does not occur when the same auditors listen to the speech of non-stutterers. This increased variability appears to be a function of the listeners' subjective states as affected by the stuttering heard rather than by merely listening to speech.—*C. V. Hudgins* (Clarke School).

5274. [Anon.] *The recreational cinema and the young.* New York: Columbia Univ. Press, 1938. Pp. 31. \$0.20.—(*Educ. Abstr.* IV: 552).

5275. **Attwater, D.** *Body and spirit; essays in sexuality.* (Trans. from the French.) New York: Longmans, 1939. Pp. 212. \$2.40.—Essays on the main modern theories about sex, all written from a standpoint of agreement with the teachings of the Catholic Church.—(Courtesy of *Publishers' Weekly*).

5276. **Bárány, E.** *Transposition of speech sounds.* *J. acoust. Soc. Amer.*, 1937, 8, 217-219.—Recognizing the importance for phonetic theory of research in the transposition of the sounds of language, the author performed several experiments relative to the problem. He observed especially the transpositions which occur when linguistic sounds are uttered into hydrogen rather than air. The sounds of resonance from the buccal cavity are then elevated by two octaves (maximal limit), but the fundamental, produced by the vocal cords, remains unchanged. If, in general, the character of the voice changes very much, language continues to be intelligible. This variation has been explained by Tyndall by the passage of the "sound" from a light gas into a heavier. According to the present author, this variation is rather to be explained as a change in resonance at the level of the buccal cavities. His experiments have investigated particularly the role of articulation in this phenomenon.—*W. S. Verplanck, Jr.* (Brown).

5277. **Biss, K.** *Sozialpsychiatrische Probleme der Landflucht. Eine Untersuchung über den Zusammenhang von Begabung und Abwanderung in 2 Juradörfern.* (Social-psychiatric problems of migration from the country. An investigation of the relationship between endowment and emigration in two Jura villages.) Zurich: Orell Füssli, 1939. Pp. 23.

5278. **Buchanan, S.** *The psychology of human art.* *Proc. 3rd bienn. Mtg Soc. Res. Child Developm.*, 1939, 6-7.—Abstract.—*R. C. Strassburger* (St. Joseph's College).

5279. **Ciocco, A.** *On human social biology. III. The elements affecting the formation of the marital group.* *Hum. Biol.*, 1939, 11, 234-247.—The analysis of the basic and immediate conditions which adversely affected the premarital relationships of 117

men and 333 women (mean ages 25 and 21 years) showed that 70% included differences in social status, religion and nationality, promiscuous sex conduct, and inadequate finances. The most frequent immediate conditions were parental objection and a fear of change in affection. Other factors studied included age, marital status, temperamental traits, social vices, kinship, and somatic peculiarities.—O. W. Richards (Spencer Lens Company).

5280. Coleman, S. M. **The myth of the fairy birth.** *Psychoanal. Rev.*, 1939, 26, 301-314.—Tales concerning the birth of a fairy are widely distributed over Europe. A composite example is given in the paper, and an attempt is made to discover the wish content of this composite myth and the repressive forces making necessary a disguised form. It is concluded that "the driving force responsible for the creation of the myth was the sexual curiosity of the myth-maker . . . he identified himself with the midwife. . . . Prying and peeping into sexual affairs were taboo and the myth makes it quite clear that sexual knowledge was severely prohibited. Repressive forces were responsible for the symbolic form in which the various physiological processes leading up to parturition have been portrayed. These processes were described in terms of infantile sexuality. The fairies were found to be ultimately parent surrogates, the myth-maker's earliest sexual knowledge having been gained by observation upon parental intercourse. These experiences resulted in the first genital feelings. The myth also suggests that the severest prohibition was upon masturbation associated with incest fantasies."—C. N. Cofer (Brown).

5281. Dean-Throckmorton, J. **Speech, voice and hearing bibliography.** *J. Speech Disorders*, 1939, 4, 181-191.—C. V. Hudgins (Clarke School).

5282. Diserens, C. M., & Fine, H. **A psychology of music.** Cincinnati: Authors, 1939. Pp. 405.—Chapters are devoted to "the origin of music," "animal auditors," "music in mythology and folklore," "music of magic and sorcery," "music and religion," "music and medicine," "music, melancholy and ecstasy," "music and daily tasks," "early experiments on the effects of music," "experiments pertaining to the influence of music on behavior," and "contemporary experimental work on the psychology of music." There are a summary, an index, and chapter bibliographies.—P. R. Farnsworth (Stanford).

5283. Fischer, E. **Rasse und Vererbung geistiger Eigenschaften.** (Race and the inheritance of mental traits.) *Z. Morph. Anthr.*, 1939, 38, 1-8.—Mental traits are based on heredity and show racial differences in their distributions and central tendencies, with interracial overlapping. The author cites as his evidence several studies of racial groups in America.—P. L. Krieger (Leipzig).

5284. Freud, S. **Moses and monotheism.** (Trans. by Katherine Jones.) New York: Knopf, 1939. Pp. 218 + vi. \$3.00.—The derivation of the name Moses from the Egyptian vocabulary and the

divergence of the Moses legend from all others support the hypothesis that Moses was an Egyptian. If Moses was an Egyptian, he may well have been a monotheistic worshiper of Aton, a man of status who lost power with the overthrow of the 18th dynasty and of Ikhnaton, and who chose the Hebrews in Egypt as his people in order to promote his religion and found a new nation. Freud suggests such a hypothetical historical account as likely from the psychoanalytic implications of the legend of Moses and of the belief of the Jews that they are the chosen people. Freud also considers the possibility that Moses was murdered during the course of the Exodus, and he reasons that the Levite priests kept alive the legend, compromised with the followers of Jahve but kept the practice of circumcision and gradually made Jahve over into the God of Moses. Thus Moses created the Jewish character by giving the Jews a religion which heightened their self-confidence, kept them segregated, and opened the way to intellectual attainments by requiring further instinctual renunciations. These effects were produced only after a very long period and in a fashion analogous to the return of the repressed in the life of a neurotic. Freud considers the hatred toward the Jews to be a hatred toward Christianity displaced to the people who historically gave Christianity to the world.—J. McV. Hunt (Brown).

5285. Goldstein, M. A. **Practical aspects of speech correction.** *J. Speech Disorders*, 1939, 4, 99-102.—Along with a brief review of speech pathology, cases are cited in which successful therapy was accomplished in congenital and traumatic aphasia, intelligible speech with complete excision of the tongue, speech with artificial larynx, and speech following destruction of the vocal cords. "These cases . . . emphasize and corroborate the value of my observations that much of the normal mechanism in speech production is still imperfectly or incompletely understood and that physiological compensation is a working asset offering opportunities for much research and closer study."—C. V. Hudgins (Clarke School).

5286. Gordon, K. **Meredith as psychologist.** *J. Psychol.*, 1939, 7, 317-322.—The scientific generalizations contained in Meredith's works, his hypotheses, his equipment (a critical mind), and his conclusions are discussed as the procedures of a psychologist.—J. McV. Hunt (Brown).

5287. Hawk, S. S. **Can a child be taught to talk?** *J. Speech Disorders*, 1939, 4, 173-179.—"It is possible to teach the child to talk, by strengthening the bonds between the more easily aroused motor and kinesthetic centers of the brain, and in some children, with the visual and auditory perceptual areas, until finally patterns are built up which involve gaining a knowledge of where the movement begins, the form of the movement, and finally the timing of the movement." The methods of the motor-kinesthetic approach are summarized. This direct approach to guiding the speech development of the child should begin about the 12th month and

continue to 2½ years. The early beginning prevents faulty habits and insures normal speech from the beginning.—*C. V. Hudgins* (Clarke School).

5288. **Hoepen, E. C. N.** *Enige gesigspunte in die Suid-Afrikaanse argeologie.* (Some viewpoints in South African archeology.) *S. Afr. J. Sci.*, 1939, 35, 92-125.—A discussion is given of various terms used in archeology and of all the cultures recognized in South Africa.—*E. C. N. v. Hoepen* (National Museum, Bloemfontein).

5289. **Hudgins, C. V., & Di Carlo, L. M.** *An experimental study of assimilation between abutting consonants.* *J. gen. Psychol.*, 1939, 20, 449-469.—12 English-speaking subjects served in this experiment. Kymograph records of air pressure inside the mouth and of air expelled from the mouth during repetition of sense and nonsense syllable groups with prescribed accents and abutting consonants were made. Changes in the latter were noted under five different conditions. "Increasing rate of syllable utterance is the most important factor responsible for the changes which occur in abutting consonants, since the increased rate forces the syllables closer and closer together, thus forcing the consonant movements to accommodate themselves to these changes. Syllable accent modifies the assimilation process, retarding or facilitating it, and may control its direction, but rate of utterance is the fundamental factor in the process."—*C. N. Cofer* (Brown).

5290. **Jaensch, E. R.** *Der Hühnerhof als Forschungs- und Aufklärungsmittel in menschlichen Rassenfragen.* (The poultry-yard as a medium of research and clarification in problems of human race differences.) *Z. Tierpsychol.*, 1939, 2, 223-258.—The superiority of Nordic races is reflected in race differences among chickens. The Nordic chick is better-behaved and more efficient in feeding than the Mediterranean chick, and less apt to over-eat by suggestion. These differences parallel certain typological differences among humans. The Nordic is an inwardly-integrated type, the Mediterranean an outwardly-integrated type. The poultry-yard confutes the liberal-bolshevik claim that race differences are really cultural differences, because race difference among chicks cannot be accounted for by culture.—*G. M. Gilbert* (Lehigh).

5291. **James, W. T.** *Further experiments in social behavior among dogs.* *J. genet. Psychol.*, 1939, 54, 151-164.—In a litter group of 5 dogs and another group of 6, social orders were formed, including aggressive animals which dominated all others, and timid animals which were uniformly submissive, as well as dogs showing intermediate degrees of dominance. Only these last shifted position upon transfer to a new group. Study of feeding and mating behavior in the kennel showed that a small but aggressive animal can dominate a large, less aggressive animal; hence size is not the determining factor in social position. Repeated failure in fighting inhibited aggressive behavior toward the victor, but not toward other animals.

The relation between social behavior and constitutional differences is considered briefly.—*D. K. Spelt* (Mississippi).

5292. **Johnson, G. R.** *Will or shall.* *Sch. & Soc.*, 1939, 49, 779-780.—Since there is wide variation in the use of *shall* and *will* among educated people, a completion test was given to teachers, college students, and high-school pupils in which either *shall* or *will* was to be supplied. The lack of agreement in results is interpreted not by lack of understanding of the grammatical rule, which all gave correctly, but by the possibility in most cases of interpreting a statement as expressing either simple futurity or determination. Excerpts from the test are given, with results in the form of percentages.—*M. A. Lee* (Chicago).

5293. **Johnson, W.** *Treatment of stuttering.* *J. Speech Disorders*, 1939, 4, 170-172.—*C. V. Hudgins* (Clarke School).

5294. **Junker, B. H.** *Methods for the study of personality in negro society: Part I. Negro personality in the social context.* *Proc. 3rd bienn. Mtg Soc. Res. Child Develpm.*, 1939, 26-34.—A preliminary report of research on the effects of minority racial status upon the personality development of negro youth. Principles for classification and interpretation of negro personality types are illustrated in a social analysis of personality development and adjustment of one particular social type.—*R. C. Strassburger* (St. Joseph's College).

5295. **Kadner, S.** *Rasse und Humor.* (Race and humor.) (2nd ed.) München: J. F. Lehmanns Verl., 1939. Pp. 254. RM. 4.80.

5296. **Kainz, F.** *Die Sprachpsychologie der deutschen Romantik.* (The language psychology of German romanticism.) *Z. Psychol.*, 1938, 143, 317-390.—The author considers language a valuable means of obtaining psychological insight into an individual and his time, and from this point of view he analyzes and discusses German romanticism as represented by such men as Novalis, Tieck, Hoffmann, Kleist, Schlegel, Hegel, etc.—*G. F. J. Lehner* (Vermont).

5297. **Kanetune, K.** [On consonants as noise.] *Jap. J. Psychol.*, 1939, 14, 49-52.—The author classifies Japanese consonants into three kinds, and treats the sound-waves of [h] or [s] and other problems on consonants.—*R. Kuroda* (Keijo).

5298. **Kinberg, O.** *De la morale comme phénomène social objectif.* (Morality as an objective social phenomenon.) *Theoria*, 1939, 5, 61-80.—A treatise by a criminologist on individual differences in intellectual and emotional response to moral situations, with case histories. Schematic grouping of different types includes: (1) people intellectually aware of gross moral values but lacking the emotional element, (2) those equipped with sufficient emotional capacity but lacking intellectual discrimination, (3) those suffering from cerebral lesions. Various clinical methods for ascertaining the individual's attitude toward his own acts are

presented. Theories of Naecke and Faconnet are discussed. The author suggests that reason without the emotional element is unimportant in determining human behavior.—F. Witmer (Mooseheart Laboratory for Child Research).

5299. Klingbeil, G. M. **The historical background of the modern speech clinic.** *J. Speech Disorders*, 1939, 4, 115-132.—A list of 150 "authorities" on the problem of stuttering, beginning with Herodotus, 424 B.C., and ending with Coriat, 1915 A.D., is given. A brief note stating the theory or contribution of each author follows each name in the list.—C. V. Hudgins (Clarke School).

5300. Kopp, G. A. **Treatment of stuttering.** *J. Speech Disorders*, 1939, 4, 165-169.—C. V. Hudgins (Clarke School).

5301. Koziol, H. **Die Dehnung kurzer Vokale im heutigen Englisch.** (Prolongation of short vowels in present-day English.) *Arch. ges. Phon.*, Abt. 1, 1939, 3, 38-40.—The reasons for lengthening the short vowels in contemporary English may not be purely phonetic, but emotional. There is a lengthening for emphasis, especially the inclination to draw out words which often express the speaker's strong sympathy.—P. L. Krieger (Leipzig).

5302. Kuhn, E. G. **The pronunciation of vowel sounds.** *Teach. Coll. Contr. Educ.*, 1938, No. 757. Pp. vi + 86. \$1.60.—(*Educ. Abstr.* IV: 478).

5303. Lasswell, H. D. **The propaganda technique of recent proposals for the foreign policy of the U. S. A.** *Psychiatry*, 1939, 2, 281-287.—The author examines critically various proposals for the foreign policy of the U. S. A. to determine the character and nature of the persuasiveness with which these are put forth, as exemplified particularly in Livingston Hartley's "Our Maginot Line: the Defense of the Americas"; Lewis Mumford's "Men Must Act"; and Clarence K. Streit's "Union Now: A Proposal for a Federal Union of the Democracies of the North Atlantic." Hartley argues in terms of American national interest, not moral principles, and relies for effect upon the steady progression of plausible alternatives. Mumford writes with passionate sincerity, subtle vituperation, negative references, and skillful positive phrase-making. Streit, proposing a "union" rather than a league of democratic nations, relies upon the use of key symbols, utilizing terms rich in cognate associations of a friendly humane character, and saturates his vocabulary with the language of American political and cultural life, giving a predominant tone of alert reasonableness. The author concludes that, where Hartley advocates prompt but limited action with England and France against Germany, and Mumford calls for crisis action, Streit argues for remoter and higher values, the consolidation of those states in which he trusts.—M. H. Erickson (Eloise Hospital).

5304. Lehman, H. C., & Ingerham, D. W. **Man's creative years in music.** *Sci. Mon.*, N. Y., 1939, 48, 431-443.—For various types of "superior" music (grand opera, orchestral, cantatas, symphonies)

the years of maximum productivity for deceased composers are in the age range from 35 to 39. For contemporary American composers (miscellaneous contemporary music) the productivity curve attains its peak at ages 50-54 inclusive. Both currently and formerly the peak for quality of musical composition appears at earlier age levels than does the peak for quantity of production.—O. P. Lester (Buffalo).

5305. Lévy-Bruhl, L. **L'expérience mystique et les symboles chez les primitifs.** (Mystical experience and symbols among primitives.) Paris: Alcan, 1938. Pp. 314.—Evidence is again marshalled in support of the author's long held view that mystical experience is peculiar to a primitive form of mentality. The experience of immediate contact with invisible realities and with the supernatural belongs to the older affective rather than to the later cognitive sphere of mind. This experience is aroused by the presence of something unusual, as for example the birth of twins or of albinos, the recent dead, the strange appearance of the animal about to be shot, etc. This mystical experience is a naïve interpretation of the something unusual in the light of "collective representations" implanted by the group from earliest childhood and reified by the startle experience of the individual. Primitive man seeks by means of magic to win the favor of the "invisible powers." By way of a *paris pro toto* association of ideas, localities, peculiarly shaped stones, or paintings become for primitive men symbols of the supernatural, i.e., visible revelations of the invisible powers.—F. C. Sumner (Howard).

5306. Lewis, H. B. **Current research in social psychology.** *Psychol. League J.*, 1939, 3, 59-63.—In this paper are reviewed a number of theoretical and experimental articles dealing with phases of social psychology. The bibliography includes 30 titles, most of which appeared in 1938 and 1939.—C. N. Cofer (Brown).

5307. Meinhardt, H. **Die Kinderzahlen der ostpreussischen Volksschullehrer.** (Family size of elementary school teachers in East Prussia.) *Arch. BevölkWiss. BevölkPolit.*, 1939, 9, 116-135.—A reduction in family size is noticeable even in those occupations which do not require long preparation. Only elementary school teachers and preachers produce enough offspring to balance mortality. Roman Catholic teachers exceed this necessary minimum considerably. Intervals between births have become greatly prolonged. Protestant teachers marry more than 2 years earlier than Catholics, from 2 to 3 years later than skilled laborers, very little earlier than engineers. German college professors marry about five years later than do teachers.—P. L. Krieger (Leipzig).

5308. Möhring, H. **Lautbildungsschwierigkeit im Deutschland.** (Speech difficulties in Germany.) *Z. Kinderforsch.*, 1938, 47, 185-235.—A statistical study of the frequency of various types of articulatory defects among primary grade children in 23 German provinces. A standard articulation test was used. The significance of the findings for the

teaching of reading is pointed out.—*F. L. Good enough* (Minnesota).

5309. Moses, E. R., Jr. *Palatography and speech improvement.* *J. Speech Disorders*, 1939, 4, 103-114.—A series of palatograms taken from a group of subjects indicate: "not only that different persons speaking the same language do not make the same tongue-palate contact for the same sound or sound combinations, but that the same persons do not make the same contacts for the same sounds, even on the same day." These facts reduce the value of the palatogram as a device for teaching speech sounds. Factors other than position and areas of contact are involved.—*C. V. Hudgins* (Clarke School).

5310. Mühlhäuser, E. *Über sozialökonomische Bestimmungsgründe wirtschaftlichen Handelns.* (Social-economic causal laws and the psychological bases of economic action.) Stuttgart: Kohlhammer, 1939. Pp. 97. RM 5.40.

5311. Omwake, L. *Honesty is relative.* *Sch. & Soc.*, 1939, 49, 714-716.—Citing May's findings in regard to honesty, the author gives illustrative and confirmatory material from her 6-year use in a junior college of a questionnaire in which ethical situations are described. Honesty appears to be influenced chiefly by social check, possibility of detection, and seriousness of offense. Practice and theory do not always agree. 79% of these typical students admit cheating in examinations, although 83% prefer frankness to white lies.—*M. A. Lee* (Chicago).

5312. Overton, G. S. *Love, marriage and parenthood.* New York: Harper, 1939. Pp. 287. \$2.00.—A discussion of the problems of the love-marriage-parenthood relationships, designed to give a full view of the whole married existence with all its possibilities for full personal living.—(Courtesy Publishers' Weekly).

5313. Palmer, M. F., & Gillett, A. M. *Respiratory cardiac arrhythmia in stuttering.* *J. Speech Disorders*, 1939, 4, 133-140.—As evidence for the "deep-rooted neuro-physiological difference between stutterers and normal speakers" the authors find that stutterers differ from normal speakers in that their mechanism of respiratory cardiac arrhythmia functions in a directly opposite manner. Normal speakers during breathing without speech show a decrease in the length of the heart beat during the inspiratory phase and an increase during the expiratory phase. These modifications are opposite in the breathing of stutterers. Distinct sex differences were found for the phenomenon among non-stutterers but not among stutterers. "Stuttering is the result of a sex-linked neuro-physiologically-metabolic etiology."—*C. V. Hudgins* (Clarke School).

5314. Pierce, W. O'D. *Air war. Its psychological, technical and social implications.* New York: Modern Age Books, 1939. Pp. 224. \$0.50.—In Part 1, some of the documentary evidence that the bombing pilots live in a state of tension is presented in 4 case histories from the World War;

some of the fundamental drives which control their morale are vividly revealed. Parts 2 and 3 give a brief history of civil and military aviation from the beginnings, and indicate a rapid development of aeronautical technology since the World War. One is reminded of the probable use of the airplane as a weapon against civilian populations in a future war from the experiences of the Abyssinian, Chinese, and Spanish wars. Part 4 is a discussion of psychological attitudes such as "fighting tradition," "prestige," and "morale," and of recent propaganda technique. The author contrasts and evaluates the methods employed by the dictatorships and the democracies in the problem of the "will to fight." A select bibliography and an index are provided.—*K. S. Yum* (Chicago).

5315. Rasmussen, E. W. *Social facilitation in albino rats.* *Acta psychol.*, Hague, 1939, 4, 275-294.—Before they became negatively conditioned to the electric shock which they underwent after being permitted 3 seconds of drinking, thirsty rats in groups of 3 tried more often to drink again than when they were tested singly. The negative conditioning also died out sooner with rats tested in groups than with single individuals.—*R. C. Givler* (Tufts).

5316. Rauschenberger, W. *Die Begabung der in Mitteleuropa ansässigen Rassen für Mathematik und mathematische Naturwissenschaften.* (The talent of middle European races for mathematics and the mathematical natural sciences.) *Arch. Rass.-u. GesBiol.*, 1939, 33, 1-9.—The Alpine race is not so uncreative as is often assumed. It has produced great mathematicians (Euler, Monge, Poisson). The Dinaric and the Frank, on the contrary, are more inclined to concrete imagery than to abstract thought. The East Baltic race also stands in the background in this respect. The Phalic race appears to have produced the majority of the mathematicians and natural scientists in Germany.—*P. L. Krieger* (Leipzig).

5317. Richter, E. *Das psychische Geschehen und die Artikulation.* (The psychic life and articulation.) *Arch. néerl. Phon. exp.*, 1937, 13, 41-71.—Psychic states exert a marked influence on the movements of articulation. It is a question primarily of affective states linked to more or less extensive organic changes. But this poses a question most important from the point of view of the psychology of language: to what extent the phonologic consciousness of the speaker and of those in his company reacts against such changes of articulation and of pronunciation. The author analyzes a certain number of cases which she divides into two major groups. The first of these includes those changes of articulation which are occasional and do not become fixed inasmuch as they are opposed by the phonologic consciousness of the speaker. These may reappear if the situation which originally provoked them is reinstated. The second includes permanent modifications which are produced by mental states frequently appearing. Errors of articulation then

become acceptable to the phonologic consciousness.—(Courtesy *Année psychol.*)

5318. Riesenfeld, A. **Fruchtbarkeitsriten in Melanesien.** (Puberty rites in Melanesia.) *Int. Arch. Ethnogr.*, 1939, 37, 1-30.—Magic is a basic element in all forms of culture and offers a fruitful field for historical investigation.—P. L. Krieger (Leipzig).

5319. Rotter, J. B. **Studies in the psychology of stuttering. XI. Stuttering in relation to position in the family.** *J. Speech Disorders*, 1939, 4, 143-148.—Data covering 522 cases of stuttering show that more only children and fewer middle children were found among stutterers than among non-stutterers. The mean number of years between the stutterers and their nearest siblings was significantly larger than the mean number of years between the stutterers' non-stuttering siblings. The analysis suggests a relationship between the development of stuttering in a child and the degree to which the child is pampered.—C. V. Hudgins (Clarke School).

5320. Seashore, C. E. **The psychology of music. XX. Musical inheritance.** *Music Superv. J.*, 1939, 25, No. 6, 21.—A discussion of that portion of Amram Scheinfeld's new book, *You and Heredity* (Stokes), which deals with the genealogies of three groups of musicians.—P. R. Farnsworth (Stanford).

5321. Smith, M. **Eminent men.** *Sci. Mon.*, N. Y., 1939, 48, 554-562.—A brief summary of what has already been thought about eminent men as a class.—O. P. Lester (Buffalo).

5322. Smith, M. E. **Some light on the problem of bilingualism as found from a study of the progress in mastery of English among preschool children of non-American ancestry in Hawaii.** *Genet. Psychol. Monogr.*, 1939, 21, 121-284.—This is a study of the language development of children 2 to 6 years of age born in Hawaii and with a non-English-speaking ancestry. "Six samplings of 125 each of children residing in Honolulu and representing groups of Chinese, Filipino, Hawaiian and part-Hawaiian, Japanese, Korean, and Portuguese ancestry have been studied." With additional studies from smaller groups the total number of children was 1000. A verbatim record of each child's spontaneous conversation in a standard situation was made by a student who understood the language of the child's ancestors as well as English. The conversations were analyzed as to proportion of English, number of words per sentence, degree of egocentricity, form and function of sentences, negative questions, parts of speech, and inflection. In addition to the detailed results for these analyses the study reveals that these children are retarded in language development seriously enough to interfere with first-grade work. Kindergarten and nursery-school attendance are shown to be of great value. As a rule the preschool population prefers the use of English. "The evidence, although insufficient, suggests that pidgin English is more responsible for incorrect English and bilingualism for the overuse of interjections, short sentences, immature type of questions when classed as to meaning, and lack of complex sen-

tences." The bibliography includes 37 citations.—F. M. Teagarden (Pittsburgh).

5323. Sterzinger, O. H. **Grundlinien der Kunstpsychologie.** (Outlines of the psychology of art.) Graz: Leykam, 1939. Pp. 294. RM. 15.00.

5324. Ushijima, Y. [A study on the development of religious consciousness.] *Annu. Phil. (Rikkyo Univ.)*, 1939, 2, 57-104.—74 students of a women's college were asked to write their recollections under the title "my religious experiences." The data thus obtained were considered from two principal standpoints, the influence of religious education upon religious consciousness (divided into the experiences of those brought up in non-religious, semi-religious, and religious environments), and the religious consciousness in each developmental stage (divided into self-centered, imaginative, intellectual, spiritual, and social stages). The author concludes that young people are not able to realize the non-intellectual essence of religion, and it is therefore necessary to give them artistic and moral religious instruction and to lead them logically to the recognition of God by theological means.—R. Kuroda (Keijo).

5325. Van Riper, C. **Ear training in the treatment of articulation disorders.** *J. Speech Disorders*, 1939, 4, 141-142.—The necessity for a thoroughgoing ear training for cases of articulation disorders is emphasized. The author presents the aims and methods for this preliminary training.—C. V. Hudgins (Clarke School).

5326. [Various]. **Section meeting; therapeutic criteria in social agencies.** *Amer. J. Orthopsychiat.*, 1939, 9, 399-421.—The discussion on therapeutic criteria in social agencies was led by J. Kasanin. The following speakers participated: B. J. Wajdyk, D. M. Levy, A. Garrett, J. H. W. van Ophuijsen, E. V. N. Emery, C. Towle.—R. E. Perl (New York City).

5327. Woodard, J. W. **Cultural evolution and the social order.** *J. soc. Phil.*, 1939, 4, 313-326.—In cultural evolution four major factors interact upon and accentuate each other. These are: (1) the continued accelerative cultural heritage; (2) more effective modes of transportation, communication, and media of exchange; (3) the exploitation of more effective sources of power and energy, reflected in better modes of production and subsistence and making possible a larger group size; (4) the development of disciplined and refined methods of thinking, knowing, and doing.—W. A. Varvel (Kansas).

5328. Wüsthoff, P. G. **Die Bedeutung der Vererbung auf dem Gebiet der Sprach- und Stimmheilkunde.** (The significance of heredity in the cure of language and speech defects.) *Jahres-kurse ärztl. Fortbild.*, 1938, 29, 38-51.—More boys than girls stutter and are retarded in language development. Even parents are usually incapable of distinguishing the rhythms, melodies, and voices of their twins, and in cases of speech defect both usually lack the same sounds. This is always true in the case of identical twins. It appears that about

22% of the cases of stuttering have a hereditary origin.—*P. L. Krieger* (Leipzig).

5329. Yerkes, R. M. Social dominance and sexual status in the chimpanzee. *Quart. Rev. Biol.*, 1939, 14, 115-136.—A simple food response experiment was used to test dominance-subordination of 22 pairs of adult and adolescent chimpanzees to discover the significance of sexual status. When the male is dominant he grants privilege to the estrous female, and if subordinant he may gain privilege from the female during the estrous period. The male is more generous toward the female than is another female. Associated female animals exhibit homosexual behavior which simulates the heterosexual. Mating behavior may be initiated by either sex, not only by the male. It did not appear that the activity of the chimpanzee is monopolized by sexual interest. The sexual appears instead as one of several biologically essential interests and types of activity.—*O. W. Richards* (Spencer Lens Company).

5330. Zilboorg, G. Propaganda from within. *Ann. Amer. Acad. polit. soc. Sci.*, 1938, 198, 116-123.—The psychopathologist can contribute to political and social thought. Specifically, in the field of propaganda, it is his business to establish the mental processes following the "swallowing" of propaganda, and to assess the credit that is the propagandist's for establishing emotional preferences. Emotions arise from the basic instincts; these are still "the most potent factors in human behavior," and include the acquisitive instincts, the propensity to hate, our gregarious (love) instincts, etc. Propaganda is designed to make an emotional appeal, and secondarily to assume the form of independent rational thought. The example of promotional salesmanship is used to illustrate these points. War propaganda is discussed in terms of its link to the aggressive, destructive drives; to succeed, such propaganda must touch off fear and hate. This is possible when there is a large "reservoir of hatred stored up within the nation," a condition that follows particularly upon suppression and subjugation of individual citizens, as in dictatorships. Hatred is easily transferred or displaced; thus it can be redirected by propaganda to foreign enemies or internal scapegoats. However, "war propaganda is somehow hopelessly inefficient when people have enough to eat and when they are not afraid and when they are permitted to be socially angry." Thus, "where social changes are concerned, propaganda in general is a secondary phenomenon and not a real tool."—*L. J. Stone* (Brooklyn College).

5331. Zinke, H. Der Druck in der Handschrift. (Pressure in handwriting.) *Z. angew. Psychol.*, 1939, 56, 217-227.—The author discusses the various meanings that have been ascribed to handwriting pressure, and suggests, showing samples, that pressure is a measure of an individual's contact with reality (*Ding-Nähe* and *Ding-Ferne*). Slight pressure is characteristic of the "non-sensual" individual, i.e. one not in vital contact with reality, the "thinker"

rather than the "feeler." Heavy pressure indicates the opposite characteristics.—*G. F. J. Lehner* (Vermont).

5332. Zwirner, E. Phonologische und phonometrische Probleme der Quantität. (Phonologic and phonometric problems of quantity.) *Proc. 3rd int. Congr. phon. Sci.*, Ghent, 1938, 58-65.—Studies have proved that there are psychophysical thresholds for the perception of differences of duration of sounds; that these thresholds differ and, following the Weber-Fechner law, are considerably higher for length than for shortness; and that the range of variation for both shortness and length is contained within these psychophysical limits. This proves that phonological shortness and length form a single group in the psychology of perception. The attempt of experimental phonetics to build up a phonological contrast of length-shortness on physical, physiological, or psychophysical measurements is doomed to failure. This opposition, so far as it rests on phonometry, must be presupposed. This holds not only for the measurement of quantity but also for all speech characteristics.—*P. L. Krieger* (Leipzig).

[See also abstracts 5058, 5072, 5103, 5132, 5133, 5144, 5146, 5196, 5198, 5201, 5203, 5240, 5244, 5258, 5262, 5264, 5333, 5346, 5364, 5391, 5403, 5416, 5419, 5420.]

CRIME AND DELINQUENCY

5333. Adell, G. Den psykiatiska undersöknin gen av vissa lösdrivare och alkoholister i Sverige år 1938. II. Kvinnliga lösdrivare. (The psychiatric investigation of certain vagrants and alcoholics in Sweden in 1938. II. Women vagrants.) *Soc-med. Tidskr.*, 1939, 16, 52-58.—A continuation of a former article (see XIII: 3663).—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

5334. Aptekar, H. H. Causality and treatment. *Amer. J. Orthopsychiat.*, 1939, 9, 387-394.—A detailed report of treatment of a delinquent boy is given as an example of causal therapy.—*R. E. Perl* (New York City).

5335. Boshes, B. Studies in delinquency. I. Constitutional factors. *Proc. 3rd bienn. Mtg Soc. Res. Child Develpm.*, 1939, 110-111.—Abstract.—*R. C. Strassburger* (St. Joseph's College).

5336. Breguet, R. Preliminary survey of 1000 case histories of inmates of the Elmira Reformatory. *Amer. J. med. Jurisprud.*, 1938, 1, 101-118.—*A. Chapanis* (Yale).

5337. Drewry, H. H. Treatment possibilities in an institution for delinquents. *Amer. J. Orthopsychiat.*, 1939, 9, 379-387.—This is a discussion of the type of case work applicable in an institution for delinquents.—*R. E. Perl* (New York City).

5338. Durea, M. A. The differential diagnosis of potential delinquency. *Amer. J. Orthopsychiat.*, 1939, 9, 394-399.—Traits which distinguish reliably between delinquents and non-delinquents are likewise significant in differentiating between un-

adjusted (not overtly delinquent) and adjusted subjects. Thus, it is possible to apprehend delinquent tendencies before they function in overt forms of vicious conduct.—*R. E. Perl* (New York City).

5339. **Gruhle, H. W.** *Antlitz, Gestalt, Haltung, Gebaren des Verbrechers.* (The criminal's face, figure, posture, and bearing.) *Msch. KrimBiol.*, 1939, 30, 215-234.—Even in criminals the exterior is not necessarily the mirror of the soul. Mimetic expressions may accompany emotions, but not always. Their occurrence means nothing definite. During the trial the prisoner's demeanor is his usual one, but under punishment it is different. The face becomes ashy gray, emaciation begins, and cranial and facial irregularities stand out more strongly. Before the 55th year deepening of the facial lines is mostly only continuous mimetic tension, subject to change. Pleasant and unpleasant attitudes may perhaps influence the form of the facial bones, but not that of the cranium. Undoubtedly there are different facial characteristics, corresponding to constitutional endowment, but there is no one criminal type with a characteristic expression. Movements may be studiously calculated, and hence are not an indicator. Speech during emotional excitement, however, may betray, and graphology may be valuable, although it can determine only formal qualities, not content.—*P. L. Krieger* (Leipzig).

5340. **Hoffman, M. H.** *The expert witness and the insanity defense plea.* *Amer. J. med. Jurisprud.*, 1938, 1, 12-18.—A discussion of past and present uses and abuses of the insanity defense plea with suggestions for changes in the relationship of psychiatrist to criminal court.—*A. Chapanis* (Yale).

5341. **Ihms, M.** *Charakterologische Untersuchungen an strafgefangenen Frauen.* (Characterological investigations of imprisoned women.) *Z. angew. Psychol.*, 1939, 56, 129-216.—A detailed case-history and questionnaire study was made of 80 imprisoned women to determine the possible presence of unique characterological traits. Results show that, instead of grouping criminals according to the crime committed, it is possible and more desirable to group them characterologically. On this basis the present criminals were divided into 3 groups: the characteristically (and characterologically) unstable, the affected (the individuals who show a great psychological need to be more than they are, to make a good appearance), and the negativistic. Other personality variables peculiar to each group are considered.—*G. F. J. Lehner* (Vermont).

5342. **Moore, H. K.** *Psychological factors in delinquency and misbehavior.* *Montana Educ.*, 1938, 15, No. 1, 6-7.—A review and discussion of various attempts to demonstrate the factors correlated with delinquency, such as perversity, mental conflict, cruelty, femininity, intelligence, and physical and behavioral traits. In addition the article considers the problem of removal vs. enforcement of

inhibitions, in its relation to the behavior of problem children.—*R. M. Gagné* (Brown).

5343. **Ödegård, Ö.** *Junge Rückfallsverbrecher in norwegischen Gefängnissen, mit besonderer Be- rücksichtigung des Psychopathie-Problems in der Kriminologie.* (Young repeaters in Norwegian prisons, with special reference to the psychopathy problem in criminology.) *Acta Psychiat., Kh.*, 1938, 13, 477-479.—The investigation concerned 39 young men, 18-23 years of age, from two of the largest prisons in Norway, having on the average 3-4 incarcerations in their record. Alcoholism, sickness, early death, or bad morals of the parents were apparent in the majority of the cases. For 33% economic and living conditions were bad. The number of children in the family was very high. A great majority were unemployed. All had bad school histories. In psychotechnical tests the ability to work was good for 21%, average for 29% and bad for 50%. A great majority had character difficulties, with many on the borderline of psychopathology.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

5344. **Shaw, C. R.** *Group factors in delinquency among boys.* *Proc. 3rd bienn. Mtg Soc. Res. Child Develpm.*, 1939, 14-26.—Recent statistical data regarding the relative frequency of lone and group offenders, together with a recognizable emphasis manifest in an historical survey of early studies, clearly demonstrate the influence of the gang as a contributing factor in delinquency. Specifically, as an analysis of the life histories of delinquent boys reveals, the gang through its influence initiates the boy into a delinquency career, serves as a source of knowledge in delinquency techniques, stimulates the formation of the attitudes and interests of the habitual delinquent, and finally, provides for the satisfaction of the basic needs of the boy in the gang. Delinquencies appear to be purposive adjustments or adaptations to the practices and norms of the group to which the delinquent belongs.—*R. C. Strassburger* (St. Joseph's College).

5345. **Wilson, J. G., & Pescor, M. J.** *Problems in prison psychiatry.* Caldwell, Idaho: Caxton Printers, 1939. Pp. 275. \$3.00.—This book, based upon experience in Federal prisons, contains a psychological classification of prison inmates, with due regard for the history of both the prison and the prisoner. The first 3 chapters survey the historical considerations, the problems of prison environment, discipline, rehabilitation, and past efforts at classification of prisoners. The next 8 chapters discuss in detail the definitions, the handling, treatment and the probabilities of eventual outcome of the normal, and the feeble-minded, psychoneurotic, psychopathic, psychotic, neuropathic, homosexual, and recidivistic prisoners, illustrating with case material. Chapter 12 elaborates the problems of discipline and the various mental attitudes to be met, and emphasizes the gradual increase in the use of psychiatric measures. The last chapter discusses the value of imprisonment, which is regarded as

limited, and the conclusion is drawn that more is to be gained by psychiatric attention to probationers and the utilization of psychiatric services in the courts. An appendix covers the principal landmarks and dates in the development of prisons. Index.—*M. H. Erickson* (Eloise Hospital).

[See also abstracts 5146, 5180, 5183, 5192, 5193, 5209, 5218, 5224, 5227.]

INDUSTRIAL AND PERSONNEL PROBLEMS

5346. Bain, R. The policeman on the beat. *Sci. Mon.*, N. Y., 1939, 48, 450-458.—The article briefly summarizes the inadequacies of our present police forces throughout the country and suggests ways and means for improving the situation.—*O. P. Lester* (Buffalo).

5347. DeSilva, H. R. Normal versus accident drivers. *J. Psychol.*, 1939, 7, 337-342.—199 volunteer automobile drivers and 56 accident repeaters were tested in a driver clinic, given a questionnaire on personal characteristics, and interviewed regarding the relation of the test records to the difficulties noted. Repeater drivers showed a fairly consistent deficit in accelerator, brake, and vigilance reaction times, simple steering, vigilance steering, vigilance combination, and speed estimation. These differences in test results as well as those found in the personal characteristics confirmed the author's conjecture that repeater drivers as a class are less fit members of society physically, economically, and educationally.—*J. McV. Hunt* (Brown).

5348. Forbes, T. W. The normal automobile driver as a traffic problem. *J. gen. Psychol.*, 1939, 20, 471-474.—"Evidence is presented from figures for one state that from the point of view of accidents which would be eliminated by ruling him off the road, the truly accident-prone driver contributes not more than three or four per cent of the traffic accident problem." Thus capacities of "normal drivers," such as judgment in overtaking and passing cars, speed of driver reaction to signs, visual characteristics of drivers, and color and attention values of signs and symbols, must be considered.—*C. N. Cofer* (Brown).

5349. Lottig, H. Grundsätzliches über die Grenzen des Experiments bei der Charakterbeurteilung (unter besonderer Berücksichtigung der Flieger-tauglichkeitsprüfung). (Fundamental considerations of the limitations of the experiment in the estimation of character, with special reference to tests of the ability of airplane pilots.) *Zbl. ges. Neurol. Psychiat.*, 1938, 87, 702-703.—Experiments in research in structural and constitutional psychobiology are used to establish kinds of reactions. In vocational ability tests, however, experiments are used to evaluate capacities, which may be divided into performances and actions. Experiments are adequate for describing elementary mental factors, but have dangers so far as they attempt to apply schematically a materialistic conception of the mind. These dangers are based on the artificiality of the situation; on the turning of the conscious toward processes which

until then were unconscious; and on the impossibility of eliminating the training factor and the difficulty of detecting cases of delayed maturation. Certain character traits of special importance for the life situation can be tested only incompletely. Aviation, for instance, requires outstanding technical, sensory, and character abilities; it is impossible to correlate these requirements with definite psychological types or to test them by means of a formal experiment.—*P. L. Krieger* (Leipzig).

5350. Schmidt, O. Auswahl und Anlernung von Erwerbslosen für die Luftfahrt-Rüstungs-Industrie. (Selection and training of the unemployed for the aircraft-armament industry.) *Industr. Psychotech.*, 1939, 16, 44-81.—Based upon an analysis of the worker requirements, a program of interlocking selection and training is being used to provide necessary personnel for the aircraft-construction industry. Manual dexterity is measured by four tests: wire bending, Poppelreuter's two-handed pattern test, a rivet-heading test, and a lifted-weights test. Memory and distance-estimation are checked by simple drawing tests. The very important capacity for space perception is tested by having the candidate make a working drawing of a tridimensional metal model. Much use is made of a "reliability" test, which consists in having the candidate repeatedly copy a complex drilling pattern. Four methods of scoring (involving combinations of speed and accuracy) are discussed. The training course is closely integrated with the program of selection, and much useful information for selection is obtained by observations of the candidate during the apprenticeship. Training in handling dural (metal) is provided by work with cardboard models, and an effort is made, by exchanging working partners, to have the worker sample the various jobs in rivetting, etc. Results and norms for several hundred workers are discussed.—*J. G. Jenkins* (Maryland).

5351. Shaw, R. P. New developments in science museum techniques and procedures. *Sci. Mon.*, N. Y., 1939, 48, 443-449.—*O. P. Lester* (Buffalo).

5352. Sumner, F. C. Measurement of the relevancy of picture to copy in advertisements. *J. Psychol.*, 1939, 7, 399-406.—In the 39 illustrated advertisements under investigation the pictures were judged (by 94 subjects) to be considerably more relevant to copy as to commodity for sale than they were to copy as to the desirable feature of the commodity.—*J. McV. Hunt* (Brown).

5353. Vesce, C. A. La prevenzione degli infortuni ferroviari e la scelta psicotecnica del personale. (Prevention of railroad accidents and psychotechnical selection of personnel.) *Folia Med. Napoli*, 1938, 24, 735-740.—Present speeds are almost beyond the limit where persons can adapt themselves to speed. This makes it especially important to have a rigorous selection of the operators.—*H. E. Burtt* (Ohio State).

5354. Wadsworth, G. W., Jr. Hiring for better labor relations. *Person. J.*, 1939, 18, 51-60.—

labor trouble is to be avoided, the right people should be hired. Intelligence and temperament tests have made possible a 90% success in hiring. Within certain limits, those who tested highest were rated highest by their supervisors. The highest scoring person is not necessarily the best person for a particular job, however. He should score near the average for people of the particular vocation. Employees should also be chosen with personalities or temperaments suited to the particular job.—M. B. Mitchell (Psychopathic Hospital, State University of Iowa).

[See also abstracts 4963, 5057, 5140, 5206.]

EDUCATIONAL PSYCHOLOGY (incl. Vocational Guidance)

5355. Anderson, H. H. The measurement of domination and of socially integrative behavior in teachers' contacts with children. *Child Develpm.*, 1939, 10, 73-89.—This paper defines and describes techniques for recording dominative and integrative contacts which teachers have with kindergarten children. An observation blank was used for 5 minutes of observation in 3 different kindergarten groups; 55 children attended these groups, taught by 3 teachers. A sample observation blank, instructions to observers, and definitions of categories of behavior are presented. Reliability coefficients of .95 to .97 were secured between the recording of 2 observers for 73 pairs of consecutive and simultaneous records of 5 minutes each. Reliability coefficients for teacher contacts with individual children were high. Tables and graphs are given showing the number of contacts per hour of the teachers with the children individually and with the group. Dominative contacts exceeded integrative ones for all teachers in individual contacts and to an even greater extent for group contacts. Some children had very few individual contacts with the teachers, whereas others had a great many.—C. N. Cofer (Brown).

5356. Archer, C. P. Recent trends in teacher selection. *Sch. & Soc.*, 1939, 49, 769-770.—Selection for teaching should extend from public school through apprenticeship years and rest on a cumulative record of history, achievement, and ratings. A combination score of scholarship, intelligence, personality, and physical fitness gives the best predictive index. In the absence of better tools by which to measure personality, ratings, if properly made, give valuable information. 14 general principles and rules in regard to the rating technique are condensed from the literature of the subject.—M. A. Lee (Chicago).

5357. Beck, E. Die Arbeitserziehung und Berufsausbildung männlicher schulentlassener Fürsorgezöglinge. (The practical training and vocational guidance of male orphans on leaving school.) *Z. Kinderforsch.*, 1939, 47, 294-403.—The author points out the need for more serious attention to the vocational training of orphans and especially of the

boys, for whom the usual type of orphanage regime affords a poor basis for life in an industrial world. Data on the number of orphans in the various German provinces are presented, together with statistics on their physical and mental condition, which on the average is inferior to that of the general population. This raises special problems of vocational training. Data are presented on the various kinds of vocational training offered in orphanages at the present time. Generally speaking, these are limited in number and variety and not well chosen with reference to conditions in the outside world.—F. L. Goodenough (Minnesota).

5358. Boyer, P. A., & Gordon, H. C. Have high schools neglected academic achievement? *Sch. & Soc.*, 1939, 49, 810-812.—In 1928 the children in the 12th grade in Philadelphia high schools were given a battery of tests. In 1938 the same battery was again given to 12th-grade children, and of these a group was equated in age and intelligence with the earlier group, in order to compare the academic success of the two groups. The results show the 1938 pupils to be as good as or better than those of 1928 in English grammar, history, chemistry, and French. They fall below the 1928 group in physics, spelling, and vocabulary. Further analysis shows a relationship between the study of Latin and English vocabulary score which, as fewer pupils take Latin now, may account in part for the above result. Our schools, with larger enrolment, greater flexibility and scope of program, and wider range of pupil ability, are evidently still able to give to the individual as efficient scholastic instruction as they did ten years ago.—M. A. Lee (Chicago).

5359. Brendgen, F. Über den Wert der Tiefenpsychologie für die Berufsberatung. (The value of depth psychology in vocational guidance.) *Zbl. ges. Neurol. Psychiat.*, 1938, 87, 705-706.—The character is dependent upon three factors: hereditary constitution, environment, and ego-ideal. These interact with each other and produce the individual style of life and the character, which is the external appearance of the style of life. The author shows, using a neurosis as illustrative material, how the neurotic style of life may influence choice of and achievement in a profession. The character traits are mostly organically determined, and the individual solution of life problems is determined essentially from the organic side. Thus "depth psychology" is of value for a vocational guidance based on science.—P. L. Krieger (Leipzig).

5360. Craig, H. W. Sports interests and attitudes of students enrolled in the service curriculum in physical education at the University of Illinois. *Res. Quart. Amer. Ass. Hlth phys. Educ.*, 1939, 10, 143-149.—87 students were questioned as to their likes and dislikes of sports which they had been required to take in a 2-year course. Attitudes toward the various branches of athletics were also sampled. It is concluded that "given a broad and well organized program in sports, the average college student will (a) select activities high in

carry-over values and (b) will enjoy taking them." —F. W. Finger (Brown).

5361. Durea, M. A. **A survey of the adjustment of school children.** *Child Develpm.*, 1939, 10, 107-114.—1838 grade and high school children in a small Ohio town were rated on the Yepsen adjustment score card. 57 teachers made monthly ratings from October through April. The adjustment score distribution was negatively skewed. No significant difference in the adjustment of white and negro children or of the sexes was discovered. Teacher attitude may affect adjustment scores. Samples of variation in adjustment from month to month are given. The clinical approach should be emphasized in dealing with adjustment problems.—C. N. Cofer (Brown).

5362. Frampton, M. E., & Rowell, H. G. [Eds.] **Education of the handicapped.** Vol. I. History. Yonkers-on-Hudson: World Book, 1938. Pp. 260. \$2.40.—(*Child Develpm. Abstr.* XIII: 974).

5363. Graf, O. **Das Experiment in der Berufsberatung.** (The experiment in vocational guidance.) *Zbl. ges. Neurol. Psychiat.*, 1938, 87, 702.—Wundt's elementary analysis with its sensory and physiological methods could give results concerning achievements but not concerning higher psychic functions such as the ability to learn by training and the working type. In the second period the work experiment preceded the ability test. With this combination the deeper psychological layers should be brought out (Giese), and behavior during prolonged work was investigated in terms of individual working curves (Poppelreuter). The "higher functions" remained unobserved even then. The third period considered the "type," as characterized by its relation to achievement and by its psychological structure. An empirical determination of the relationships between personality types and kinds of vocations should bring about more successful vocational guidance. This approach, in spite of methodological limitations, is the best available at the present time.—P. L. Krieger (Leipzig).

5364. Hartmann, G. W. **The functions of liberal educational journalism.** *Sch. & Soc.*, 1939, 49, 691-697.—"It is a psychological truism that definiteness of goal or assignment increases learning, that a clear and distinct goal channelizes the individual's energies." In contravention of this principle, the educational press is characteristically devoted to vague formulae of generalized well-being, and keeps sedulously clear of specific issues. One journal, *The Social Frontier*, is described which aims to correct this trend.—R. R. Willoughby (Brown).

5365. Heaton, K. L., & Weedon, V. **The failing student.** Chicago: Univ. Chicago Press, 1939. Pp. 286. \$2.50.—Four Michigan colleges (Albion, Central State Teachers, Michigan State, and Olivet) sponsored this study of the causes of failure in college. It was based on 938 probationary students, who were compared with control groups in terms of psychological test scores, reading ability, study habits, finances, vocational motivation, health,

personal and social factors, and sex. A large number of tables are included in the report. The study was carried on by an intensive conference method, which gained the co-operation of the students. The results make it clear that the causes of failure are not simple. The writers stress the fact that this is a service study designed to aid the institutions involved. Very few of the items studied showed clear-cut differences between the failing and passing students.—H. Schlosberg (Brown).

5366. Hetzer, H., & Noelle, G. **Lebensordnung und Lebensrhythmus im Kindergarten.** (Arrangement and rhythm of life in the kindergarten.) *Z. Kinderforsch.*, 1939, 47, 271-293.—An analysis of the amount of time spent in various activities in the kindergarten. Daily, weekly, and seasonal variations are described.—F. L. Goodenough (Minnesota).

5367. Hirsch, G. **Die Erziehungsfrage der geistigen Kindheit.** (Problems of the child's intellectual education.) *Z. pädag. Psychol.*, 1938, 39, 140-153; 1939, 40, 66-75; 125-134.—A series of theoretical discussions of aims and methods, stressing nearness to life and the avoidance of a sterile intellectualism.—M. E. Morse (Baltimore).

5368. Jameson, S. H. **Certain adjustment problems of university girls.** *J. higher Educ.*, 1939, 5, 249-255; 290.—341 freshman girls at the University of Oregon were interviewed and asked to write statements concerning their individual adjustment problems. 56 adjustment situations were largely focussed on local problems. Financial difficulty is experienced by 18% of freshmen and 35% for juniors. Problems involving the technique of learning were reported by 42% of freshmen and 40% of juniors. A crisis period is met by nearly half of the freshmen because of freedom of discussion by the instructors and more sophisticated students. This problem is reduced to approximately 14% by the end of the freshman year. Disillusionment affects from 12 to 20% of the freshman class. This problem again clears itself rather rapidly, although certain types of students react unfavorably through the junior year.—R. A. Brottemarkle (Pennsylvania).

5369. Kandel, I. L. **The Ph.D. degree.** *J. higher Educ.*, 1939, 5, 233-236; 290.—The fundamental purpose of training and methods of research and the advancement of knowledge has become confused by accrediting bodies using the Ph.D. degree as a prerequisite for appointment to teaching and administrative positions. The increase of numbers seeking the degree has confused the standards of selection, matriculation, and postmatriculation work. The author argues the necessity of some new degree to meet the new demands and hopes it would free the Ph.D. degree to return to its once accepted purposes.—R. A. Brottemarkle (Pennsylvania).

5370. Kelly, E. M. **Maturity as a factor in the education of the mentally deficient.** *Proc. Amer. Ass. ment. Def.*, 1938, 43, No. 2, 91-97.—Maturation is defined and theories of maturation cited. The four principal maturational factors are: physical, intellectual, emotional, and social. Considering only

the dominant factor gives an imperfect picture of the individual. Educational implications are elaborated.—*M. W. Kuenzel* (Children's Home, Cincinnati).

5371. Kesselring, M. *Erziehungspsychologie und ihre Pflege.* (The cultivation of educational psychology.) *Z. pädag. Psychol.*, 1939, **40**, 113-125.—New beginnings in educational psychology are being made through the realistic attitude of the Volk and new institutions and forms of education. The chief means are military psychology, which has become an imposing specialty and is an absolutely essential part of educational psychology; and the reorganization of teachers' high schools, which emphasize philology, biological and psychological anthropology, characterology, and the "science of Germandom."—*M. E. Morse* (Baltimore).

5372. Klemm, O. [Ed.] *Charakter und Erziehung.* (Character and education.) Leipzig: Barth, 1939. Pp. 288. RM. 18.—This volume constitutes the proceedings of the 16th congress of the German Psychological Association, held in Bayreuth July 2-4, 1938. Contributions are classified under the following headings: martial psychology; aspects of character: fundamentals, heredity, youth, approval; aspects of education: fundamentals, school, occupation; bodily control; action and concept; visions; study problems.—*H. Beaumont* (Kentucky).

5373. Loy, D. T., & Husband, M. W. *A health knowledge survey.* *Res. Quart. Amer. Ass. Hlth phys. Educ.*, 1939, **10**, 53-56.—"Health knowledge tests are now being used for many purposes other than to find the number of facts with which the student is acquainted. The test properly constructed and applied may be stimulating, motivating, interesting, and diagnostic of class as well as individual weaknesses and strengths." The Forsythe-Rugen test was given to 1002 college students. Average scores increased from the freshman to the senior year; variation among the college divisions was considerable. Sex differences were negligible. The greatest lack of knowledge seemed to be in health statistics and first aid. It is indicated that special instruction is needed in the facts of health to achieve a desirable fund of knowledge.—*F. W. Finger* (Brown).

5374. Meyerhans, C. *Psychologie. Was muss der Jungwachführer von ihr wissen?* (Psychology. What must the leader of a youth group know about it?) Luzern: Rex-Verl., 1939. Pp. 47. Fr. 1.50.

5375. Monroe, P. [Ed.] *Conference on examinations: III.* New York: Teachers College, Columbia University, 1939. Pp. xiii + 330. \$3.15.—This book embodies the reports and discussions of the third plenary meeting of the international conference on examinations held in Dinard, France, in September, 1938. Members of the conference from England, Finland, France, Norway, Scotland, Sweden, and the United States, and guests, submitted reports on the research conducted by the committee members in the various countries. Research on examination methods and procedures for the elemen-

tary, secondary, and collegiate levels were presented, evaluated, and discussed. European countries appear to have more faith in the essay type of examination than in the objective type. The appendix gives a list of 32 publications of the committees.—*S. A. Kirk* (Milwaukee).

5376. Nemzek, C. L., & Finch, F. H. *The relationship between age at entrance to elementary school and achievement in the secondary school.* *Sch. & Soc.*, 1939, **49**, 778-779.—From the records of 632 high-school boys and girls correlations were made between age of entrance to elementary school, high school marks, and median IQ from 5 group tests. In spite of the theoretical reasoning that a too early or too late school entrance age would, by producing difficult adjustment problems, hinder school achievement, no consistent relationships were found to exist.—*M. A. Lee* (Chicago).

5377. Nichols, M. D., Worthington, J., & Witmer, H. *The influence of the teacher on the adjustment of children to kindergarten.* *Smith Coll. Stud. soc. Work*, 1939, **9**, 360-402.—This is a comparative study of children of two kindergarten schools in the same city for a period of one semester. One school is definitely better equipped and is supervised by a better qualified teacher, while the other is poorly equipped and is supervised by a less desirable teacher. It was found that the two groups, while they showed very similar distribution in the various adjustment categories in the initial period, differed considerably at the end of one semester. They conclude that unfavorable attention from a teacher, if it duplicates a child's home situation, is detrimental to his adjustment; and that a teacher's favorable attitude is definitely helpful to most children, although it cannot wholly care for the needs of children who suffer severely from emotional deprivation at home.—*K. S. Yum* (Chicago).

5378. O'Brien, F. J. *Educating for mental health.* *Amer. J. Orthopsychiat.*, 1939, **9**, 273-287.—This is the presidential address delivered at the 16th annual meeting of the American Orthopsychiatric Association. The author discusses the importance of modern education and especially the importance of teachers' personalities in influencing the lives of children. He feels that the proper selection of teachers and supervisors is the most important problem demanding the attention of educators today. He points out the contribution which mental hygiene must make to the solution of this problem.—*R. E. Perl* (New York City).

5379. Orr, D. W. *Notes on the psychoanalytic orientation of the Southard School.* *Bull. Menninger Clin.*, 1939, **3**, 82-87.—The Southard School is a progressive school under psychoanalytic direction where children under 16 are given treatment and education by special methods. The attempt is made with neurotic or retarded children to understand disturbances in emotional life, to permit the expression of distorted feelings, and to direct such expression into channels which are more satisfying to the individual and more acceptable to society. One

objective of the school is that of becoming a training center in child psychiatry and education.—W. A. Varvel (Kansas).

5380. Révész, G. *Die psychologische Bedeutung der musikalischen Erziehung bei Mindersinnigen und Sinnesschwachen.* (The psychological significance of musical education for the sensorially underprivileged.) *Acta psychol.*, Hague, 1939, 4, 361-382.—The purposes and conditions of musical education are the same for the blind as for the seeing; in both musical talent exists equally and for both musical education is equally procurable. Indeed, some musical qualities are more enhanced for the blind than for the seeing, while dynamic effects are of great importance for deaf mutes. With many composers hardness of hearing has neither hindered receptivity nor halted productivity.—R. C. Givler (Tufts).

5381. Rodgers, E. G. *The standardization and use of objective type information tests in team game activities.* *Res. Quart. Amer. Ass. Hlth phys. Educ.*, 1939, 10, 102-112.—This study represents an "attempt to make evaluation in physical education more objective." Methods of constructing, standardizing, and administering tests of information about certain sports are discussed. A complete test of softball knowledge is included; this consists of 100 true-false statements.—F. W. Finger (Brown).

5382. Strunz, K. *Über die Stellung des höheren Schülers zum Mathematikunterricht und ihre pädagogische Bedeutung auf der Oberstufe.* (The attitude of advanced pupils to mathematics and its educational significance for the higher grades.) *Z. pädag. Psychol.*, 1939, 40, 134-150.—Extemporaneous compositions of 43 17-year-old boys on their attitude toward trigonometry expressed a preference for applied over pure mathematics, which is explicable on grounds of developmental psychology and the spirit of National Socialism. The sources of pleasure, in addition to utility, especially in war, were recognition of successful competition (invaluable for National Socialism); discipline (ethical motivation); and esthetic satisfaction, curiosity, and discovery. When these strivings are thwarted, they turn into dislike. Other pupils feel a repulsion, inherent both in the subject and in themselves. They grasp the immediate meaning, but it is alien and without positive value because their structural dynamics are oriented to the external world as a psychic expression. These negative attitudes can be prevented by a genetic approach. Mathematics should be taught, not as a "general" reality, but primarily in relation to present political and cultural life; and, even in secondary schools, pure mathematics should be taught only in so far as it is necessary for practice.—M. E. Morse (Baltimore).

5383. Updegraff, R., Dawe, H. C., Fales, E. E., Stormes, B. C., & Oliver, M. G. *Practice in preschool education.* New York: McGraw-Hill, 1938. Pp. xvi + 408. \$3.00.—The book describes the nursery-school educational program and practice at the Iowa Child Welfare Research Station. This program is founded upon a philosophy of education

which the author summarizes as follows: "1. Consideration of individual differences is paramount; 2. Clearly defined educational objectives are essential; 3. The school is considered as a supplement to the home, not a substitute for it." Many narrative descriptions of the children's behavior in various school situations are included in the book's 11 chapters: A day in the preschool laboratories, the child's introduction to the preschool, physical care and guidance, encouraging the child's intellectual development: the general environment, intellectual development: books and pictures as sources of information, intellectual development: nature study, intellectual development: social studies, language and speech, guiding the child's personality development and social behavior, fostering esthetic development: literature-music-art, activities related to the educational program. An appendix contains a description of art and music teaching, and of the record blanks, equipment, and children's books used in the preschool laboratories.—R. M. Gagné (Brown).

[See also abstracts 5058, 5063, 5069, 5111, 5292, 5407.]

MENTAL TESTS

5384. Grove, W. R. *Modification of the Kent-Shakow formboard series.* *J. Psychol.*, 1939, 7, 385-397.—Structural modifications which have shortened the series and have probably rendered the subtests more homogeneous are reported. Both structural and administrative modifications have crystallized the problem aspects of the test and have tended to minimize elements of chance. The scoring system is not based solely upon time, but includes moves or errors as scoring elements without seriously impairing the objectivity of the scoring. The writer now believes that this formboard series would be further strengthened by another change of administrative technique which he describes. The effect of this change upon the scores obtained would have to be experimentally established.—J. McV. Hunt (Brown).

5385. Hanfmann, E. *A qualitative analysis of the Healy pictorial completion test. II.* *Amer. J. Orthopsychiat.*, 1939, 9, 325-330.—This analysis is based on the responses made in the course of a comparative study of schizophrenics, patients with organic brain diseases, and normal adults. The author states that the important aspects to be grasped are (1) action, (2) general situation, and (3) clues, corresponding to 3 degrees of difficulty in the solution of the Healy pictorial completion test II.—R. E. Perl (New York City).

5386. Kuhlmann, F. *Tests of mental development.* Philadelphia: Educ. Test Bur., 1939. Pp. xi + 314. \$2.00. Test outfit (including materials for 25 examinations) \$6.80.—This is the new "Kuhlmann individual" test, designed to measure mental development from infancy to maturity. Practically none of the original test items appear in this new

scale, although all individual tests have been evaluated in 75,000 or more individual examinations. The scaling and spacing of test items has been improved and a greater objectivity of scoring has been achieved. The tests measure separately both rate and accuracy. Scores can be expressed as IQ's or in terms of mental growth units and percentage of average development. A variability score can also be derived. The test outfit consists of permanent materials, used according to the advancement of the examinee, and expendable materials, including individual record cards. The manual supplies complete instructions for administering and scoring; a discussion of the basic principles of measuring mental development; and the validity, reliability, scaling, and standardizing data of the scale.—*M. Keller* (Butler Hospital).

5387. Morris, C. M. A critical analysis of certain performance tests. *J. genet. Psychol.*, 1939, 54, 85-105.—A battery of 34 commonly used performance tests was administered to 56 school boys between the ages of 9 yrs. 3 mos. and 9 yrs. 6 mos. The intercorrelations computed for 77 variables derived from test scores ranged from moderately high positive to moderately high negative. 33 variables were chosen for factorial analysis by Thurstone's centroid method. The analysis showed that 3 was the smallest number of independent factors necessary to account for the performances. These factors were found to correspond to Thurstone's Visualizing, Perceptual Speed, and Induction; they are independent mental abilities.—*D. K. Spelt* (Mississippi).

5388. Nelson, V. L., & Richards, T. W. Studies in mental development: III. Performance of twelve-months-old children on the Gesell schedule and its predictive value for mental status at two and three years. *J. genet. Psychol.*, 1939, 54, 181-191.—Within 5 days of the birthday, appropriate Gesell tests were administered to 80 12-months-old children, some 60% of whom had been tested at 6 mos. Biserial *r*'s between single items and total score ranged from .16 to .88. Correlations between scores on the Gesell schedule at 12 mos. and scores on (1) the Merrill-Palmer at 24 and 30 mos., and (2) the Stanford-Binet at 36 mos., ranged from .32 to .35. Similar correlations using the Gesell scores at 6 mos. are uniformly higher (.37-.62). Results are compared with those of other investigators and their significance discussed.—*D. K. Spelt* (Mississippi).

5389. Wechsler, D. The measurement of adult intelligence. Baltimore: Williams & Wilkins, 1939. Pp. ix + 229. \$3.50.—A description of the Bellevue adult scale. The volume is divided into three parts. Part I discusses the nature of intelligence, the concepts of MA and IQ, the classification of intelligence, and the concept of mental deficiency. The reasons for developing a test standardized on adults are presented and mental deterioration is considered from various angles. In Part II the Bellevue intelligence scales are discussed with respect to the selection and nature of the tests, the population used in standardization with the actual procedure

and results, and the merits and limitations of the scales as determined from an analysis of their use with more than 2000 clinic subjects. Part III gives the manual of instructions for the scales, consisting of the general instructions, recording and scoring, methods of obtaining scores and IQ, and the interpretation of the latter. There are various appendices which present tables of efficiency quotients, inter-test correlations, intelligence quotients for various ages, and the recommended record blank. Index.—*D. Shakow* (Worcester State Hospital).

5390. Woodrow, H. The common factors in fifty-two mental tests. *Psychometrika*, 1939, 4, 99-107.—An analysis by Thurstone's centroid method of the intercorrelations of 52 tests was carried to 10 factors. Included were tests of social intelligence, Philip's attention tests, and Seashore's tests of musical ability. After rotation of axes, the most important factors appeared to pertain to operations conventionally alluded to by the following terms: verbal facility; spatial ability; numerical ability; attention; musical ability; and memory (or memory span). The social intelligence tests proved to be mainly tests of the verbal factor. A factorial sex difference was indicated by the superiority of men in tests of spatial ability.—(Courtesy *Psychometrika*).

[See also abstracts 5225, 5257, 5261, 5381.]

CHILDHOOD AND ADOLESCENCE

5391. Abrahamsen, D. The function of language and its development in early childhood; partly supported by an examination of the function of language in a child thirteen months of age. *Acta Psychiat. Kbh.*, 1938, 13, 649-658.—The writer gives the results of an observation made on his daughter, born in May 1936, with occasional comparative observations on his older daughter, born in September 1933. The observations were mainly concerned with how the children tried to imitate known and unknown articulated sounds and the factors which determined the result of the imitation, starting at 13 months of age with 15-minute periods of observation. Examples of sound imitation at various stages are quoted.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

5392. Aldrich, C. A. The role of gratification in early development. *Proc. 3rd bienn. Mtg Soc. Res. Child Devlpm.*, 1939, 1-2.—Abstract.—*R. C. Strassburger* (St. Joseph's College).

5393. Bakwin, H. Enuresis in children. *J. Pediat.*, 1938, 12, 757-768.—Three mechanisms are to be considered in the pathogenesis of enuresis: "the irritable bladder," faulty training, and psychological factors. In children with inherited abnormality of micturition, psychological maladjustment frequently expresses itself as enuresis. An effective remedy for irritable bladder is belladonna, combined with training, suggestion, and adjustment of the psychological environment. Enuresis solely on a psychogenic basis is rare and is to be distinguished

from factitious enuresis.—*M. P. Montgomery* (Faribault, Minn.).

5394. Bayley, N. Mental and motor development from two to twelve years. *Rev. educ. Res.*, 1939, 9, 18-37.—A review of the recent literature (1935-38). Topical headings are as follows: the development of intelligence, individual rates of growth; constancy of the IQ; factors related to or affecting intelligence: schooling and intelligence, foster homes and institutions, identical sibs, practice and instruction on tests, bilingual pupils, nature and nurture, sex differences in intelligence, racial differences, superior children, retarded children, unstable children; other aspects of mental development: learning, memory, reasoning, concepts, and percepts, language, esthetic development; development of motor abilities. The bibliography includes 234 titles.—*M. Keller* (Butler Hospital).

5395. Baynes, H. G., Crown, S., Lubner, S. H., Court, A. C., Marcus, M., & Crookshank, F. G. The parent-child relationship. *Med. Pamphl. indiv. Psychol.*, 1937, No. 17. Pp. 71.

5396. Bergemann, C. Heilbare Kindermisshandlungsfälle. (Improbable cases of child mistreatment.) *Z. Kinderforsch.*, 1938, 47, 117-141.—Case histories are presented of 8 children unwisely handled by their parents that proved amenable to treatment. It is concluded that a favorable outcome is most likely in those cases where the original difficulty is mild, where the father rather than the mother is chiefly at fault, where the diagnosis is made early and the parents are intelligent and flexible in their attitude toward the child.—*F. L. Goodenough* (Minnesota).

5397. Blatz, W. E. The group and the young child. *Proc. 3rd bienn. Mtg Soc. Res. Child Develpm.*, 1939, 8-14.—An analysis of infancy and early childhood as fundamental to an adequate comprehension of the social activity of the adult. After a period devoid of behavior patterns which might be called social, extending from birth to 12-18 months, a primitive social consciousness begins to appear. The early social patterns suggest a schema in terms of which social development may be measured and individual differences delineated. Application of this technique supports the thesis that social behavior is a derived environmental pattern. Since no two individuals ever grow up in the same social environment, herein lies an explanation of the wide quantitative and qualitative differences which exist among human beings.—*R. C. Strassburger* (St. Joseph's College).

5398. Brooks, F. D. Mental development in adolescence. *Rev. educ. Res.*, 1939, 9, 38-46.—This is a review of the recent literature (July 1935 to July 1938). The material is presented under the following headings: age of cessation and rate of mental development, range of individual differences in intelligence, constancy of IQ, factors in mental development, intelligence of high-school pupils, sex differences, miscellaneous topics, problems need-

ing investigation. Bibliography.—*M. Keller* (Butler Hospital).

5399. Bühler, C., & others. The child and his family. (Trans. by Henry Beaumont.) New York: Harper, 1939. Pp. viii + 187. \$2.50.—See XII: 2160.

5400. Calver, G. Behavior problems of children and their treatment. *Practitioner*, 1938, 41, 61 ff.

5401. Cattell, P. The development of motor functions and mental abilities in infancy. *Rev. educ. Res.*, 1939, 9, 5-17.—The recent literature, appearing for the most part during the period from July 1935 to August 1938, is reviewed under the following headings: fetal responses, neonate responses; tests and other technics of infant study: Gesell tests, Vienna baby tests, Iowa tests for young children, motor ability tests, reports by mothers, cinema records, baby biographies; factors affecting development: race, prematurely born infants, quintuplets, nurture; development of particular responses: conditioning, locomotor and posture control, inverted posture, grasping, handedness, feeding responses, form perception, color response, language, persistence of traits. A bibliography of 86 titles is supplied.—*M. Keller* (Butler Hospital).

5402. Cowan, E. A., & Stout, E. A comparative study of the adjustment made by foster children after complete and partial breaks in continuity of home environment. *Amer. J. Orthopsychiat.*, 1939, 9, 330-339.—This study investigates the relationship between the type of break in environmental continuity in the life of a child and behavior problems indicating lack of emotional security. Case histories of a child-placement agency were studied. There appeared a reliable difference in favor of partial breaks, as being less likely to be followed by symptoms of insecurity. The practical implications of this are discussed.—*R. E. Perl* (New York City).

5403. Ellsworth, F. F. Elements of form in the free paintings of twenty nursery school children. *J. gen. Psychol.*, 1939, 20, 487-501.—612 free easel paintings by 21 children from 2½ to 5½ years of age were studied. The subjects worked in 4 groups. The characteristics noted were mass and line, quality of mass, arrangement of masses, parallel bands, special kinds of mass, random lines, parallel lines, variation with parallel lines, placing of simple parallel lines or bands, outlines or hollow-line figures, figures, grounds, borders, paper subdivided, filling of the paper surface, and titles.—*C. N. Cofer* (Brown).

5404. Eyrich, M. Fürsorgezöllinge, erbiologisch gesehen. (Dependent children, biologically considered.) *Z. Kinderforsch.*, 1938, 47, 250-261.—Generally speaking, dependent children come of poor family stock and include an unduly large proportion of feeble-minded, delinquent, and physically defective cases. Careful medical and psychological examination should be made of all such children in order that the best possible provision for their care and training may be made and that those who will

be permanently unable to look after their own affairs may be given suitable protection.—*F. L. Goodenough* (Minnesota).

5405. **Fedder, R.** *A girl grows up.* New York: Whittlesey House, McGraw-Hill, 1939. Pp. 235. \$1.24.—(*Child Develpm. Abstr.* XIII: 1049).

5406. **Feige-Seiffert, H.** *Farbkenntnis und Farbverwendung des ersten Grundschuljahres.* (First-grade children's recognition and use of colors.) *Z. pädagog. Psychol.*, 1939, 40, 150-155.—134 first-grade children were presented with paper triangles, circles, and quadrants of 14 primary and secondary colors, and tested for naming, preference for, and taste in combining them. The order of frequency of correct naming was: black, brown, yellow, green, red, blue, gray, lilac, orange, and beige. Feeling for the relationship of mixed colors was shown by the names which the children made up for those the usual name of which they did not know. Light and dark shades of a color were very frequently not distinguished, or were interchanged. Girls did better than boys, but there were no differences between urban and rural pupils. (To be concluded.)—*M. E. Morse* (Baltimore).

5407. **Gottemoller, R.** *The influence of certain aspects of the home environment on the adjustment of children to kindergarten.* *Smith Coll. Stud. soc. Work*, 1939, 9, 303-359.—The author has made a study of the behavior of 22 kindergarten children in a prosperous small town near New York City, to determine whether differences in their behavior and personality could be accounted for in terms of some aspects of their parents' behavior and attitudes toward them. She found that there was a considerable agreement between the data from her own observation and the teacher's reports to her about the children's adjustment, and that there was a very close relationship between parents' behavior toward the children and the children's adjustment to kindergarten.—*K. S. Yum* (Chicago).

5408. **Grüneberg, R.** *Die Geschwisterlosigkeit in der Psychopathologie des Kindes.* (Absence of siblings in the psychopathology of the child.) *Z. Kinderpsychiat.*, 1939, 6, 16-22.—First installment of an article discussing the only child. Although many develop normally, the author finds on the basis of a study of 250 children with nervous difficulties, 81 of whom were only children, that the latter tend to develop the traits which Adler characterizes as those of the "nervous" child. Several case histories are given.—*D. Shakow* (Worcester State Hospital).

5409. **Hagenau, V.** *Unheilbare Kindermisshandlungsfälle.* (Incurable cases of child mistreatment.) *Z. Kinderforsch.*, 1938, 47, 142-156.—Case studies of 7 problem children that proved non-amenable to treatment are presented. It is concluded that the more longstanding and difficult the problem, the less likely it is that treatment will be successful, and that inflexibility of parental attitude and unhappy family relationships are unfavorable to a successful outcome.—*F. L. Goodenough* (Minnesota).

5410. **Hetzer, H.** *Missglückte Eingliederung und Rückgliederung von Kindern in ihre Familie.* (Unfortunate admission and readmission of children into their own families.) *Z. Kinderforsch.*, 1938, 47, 157-183.—The study is concerned with the effects upon child adjustment of transfer to the care of their own families after previous care by others. Two types of cases are considered, those in which the children were separated from their own families at birth or in early infancy and returned to them for the first time during childhood, and those in which the original separation occurred at some later age and was continued for a sufficient period of time so that the child had made a considerable degree of adjustment to the new home, after which he was again uprooted and returned to his parents. It is pointed out that the child's affections are not of biological but of social origin and that the problem of readjustment thus brought about is not made any the less difficult for him because of the blood relationship. The popular idea that the natural parents are always the best guardians of a child is not necessarily sound, particularly in those cases where such guardianship has not been exercised from the beginning. A number of illustrative case histories are given.—*F. L. Goodenough* (Minnesota).

5411. **Hetzer, H.** *Zu Villinger's Bemerkungen über "Kindermisshandlung und psychiatrische Mitwirkung."* (Villinger's remarks on "Child mistreatment and psychiatric co-operation.") *Z. Kinderforsch.*, 1938, 47, 267-270.—In replying to Villinger's discussion of her paper, Hetzer points out that she is entirely appreciative of the contribution that the psychiatrist is prepared to make to the problems of child behavior, but feels that the concept of abnormality must be extended far beyond its usual scope if all parents who mistreat their children and all unwisely handled children are to be considered abnormal.—*F. L. Goodenough* (Minnesota).

5412. **Ideguchi, N.** [An investigation on play activities of school children.] *Annu. Phil. (Rikkyo Univ.)*, 1939, 2, 105-127.—A questionnaire was given to 220 boys and girls from two different environmental districts in Tokyo, both including pupils in the 4th, 6th, and 8th grades of primary school and in the 2nd year of a middle school and a girls' high school. Favorite and non-favorite games, playmates, and play factors were studied; they included the classification of games (learning, imaginative, recreative, or sporting), the contents of the favorite game, and environment and age. The differences of play caused by environmental and socio-economic conditions were clearly shown throughout.—*R. Kuroda* (Keijo).

5413. **Japanese Psychological Association.** [The present status of child guidance clinics in Japan.] *Jap. J. Psychol.*, 1939, 14, 107-148.—The present organization and activity of 15 main child-welfare bureaus in Japan are described.—*R. Kuroda* (Keijo).

5414. **Jones, H. E.** *Interrelationships of physical characteristics and mental abilities.* *Proc. 3rd*

bienn. Mtg Soc. Res. Child Develpm., 1939, 2.—Abstract.—R. C. Strassburger (St. Joseph's College).

5415. Jones, H. E. Relationships in physical and mental development. *Rev. educ. Res.*, 1939, 9, 91-102.—Investigations appearing for the most part during the period from July 1935 to August 1938 are systematized for review under the following headings: evidence from correlational studies, related changes in growth curves, body build, intelligence and cranial measurement, physical abilities, physical condition, influence of month of birth, influence of month of observation, birth rank, evidence from studies of mental defect. A bibliography is supplied.—M. Keller (Butler Hospital).

5416. Laing, A. The sense of humour in childhood and adolescence. *Brit. J. educ. Psychol.*, 1939, 9, 201.—Abstract.—K. Cowdery (Stanford).

5417. Legrün, A. Zur Deutung von Kinderkritzeleien. (The significance of children's scribbling.) *Z. Kinderforsch.*, 1938, 47, 236-249.—The early scribblings of young children can be classified roughly into five stages as follows: (1) unorganized scribbles, (2) zigzag lines without much variation in form but obviously an attempt to imitate the writing of adults, (3) better articulated forms showing some variation of structure but not broken up into parts, (4) increased differentiation of forms with linear arrangement of elements divided to look like words, (5) further differentiation with occasional interposition of true letters and figures. The relationship of the various stages to age and level of intelligence is discussed.—F. L. Goodenough (Minnesota).

5418. Macy, I. G. Mineral metabolism and its possible relationship with social and emotional behavior. *Proc. 3rd bienn. Mtg Soc. Res. Child Develpm.*, 1939, 91-92.—Abstract.—R. C. Strassburger (St. Joseph's College).

5419. Maudry, M., & Nekula, M. Social relations between children of the same age during the first two years of life. *J. genet. Psychol.*, 1939, 54, 193-215.—As part of an effort to clarify C. Bühler's concepts of socially blind, socially dependent, and socially independent behavior, 92 children 6-25 mos. old were observed, for 4-min. periods, in a standardized play situation involving a single partner of the same age and play materials. The records of 24 "chief subjects" were analyzed to discover (1) what were the first reactions in a new situation, (2) what reactions were made toward the partner, (3) the development of "games" (at least 2 successive socially positive behavior units involving both partners) and "fights" (at least 2 successive socially negative behavior units). Children less than 9 mos. old respond initially to the surroundings, indulge in little really social activity, and only in impersonal games and fights. During the next 5 mos. play materials elicit the first reactions and social behavior is largely negative. From 14 to 18 mos. of age the children's behavior undergoes a gradual transition toward the positive type and in the last stage, social and play interests are integrated, so that socially

positive behavior predominates.—D. K. Spelt (Mississippi).

5420. Meltzer, H. Attitudes of American children toward peaceful and warlike nations in 1934 and 1938. *J. Psychol.*, 1939, 7, 369-384.—The attitudes of 382 children examined in 1938 are compared with 400 examined in 1934; approximately three fourths of the children in both groups were selected from the same grades, 4th through 8th, in the same school, located in a middle-class neighborhood. The comparisons showed a marked increase in children's awareness of both peaceful and warlike attitudes (185 to 1700% increase) in 1938. The largest percent increase was in reactions signifying pacifism (1530) and sympathy with the "underdog" (1700). In spite of immense differences in feeling reactions to specific nations found in 1938 as compared with 1934, two relative constants appear in the data: one is the proportion of likes and dislikes of every degree of intensity which characterizes the total pattern of feeling toward all nations; the other is the proportion of various degrees of feeling reactions expressed by the American child toward his own country.—J. McV. Hunt (Brown).

5421. Olson, W. C. Achievement and adjustment as a function of the organism as a whole. *Proc. 3rd bienn. Mtg Soc. Res. Child Develpm.*, 1939, 92-93.—Abstract.—R. C. Strassburger (St. Joseph's College).

5422. Reynolds, M. M. *Children from seed to saplings*. New York: McGraw-Hill, 1939. Pp. 337. \$2.50.—The thesis of this book is that in order to understand children one must study and observe them. Written in an informal, popular style, it attempts to give the reader sufficient information about all phases of child development from birth through adolescence to enable him to profit from observation of actual children. Beginning with the seed (heredity) it traces the processes of development from conception to birth. Thereafter it takes up the physical, mental, and behavior development of the child year by year, stressing the social relationships between children and between children and parents. The attitudes, interests, and abilities for each age are discussed, and appropriate vocational and educational programs suggested. The book has the advantage of combining a great many factors operative in the general development of children through a span of years. Attention is called throughout to methods of observation and to outside sources of information. It is illustrated and documented.—D. B. Lindsley (Brown).

5423. Schröder, P. *Schwierige Kinder*. (Difficult children.) *Z. ärztl. Fortbildung*, 1939, 36, 197-200.—For the great majority of "difficult children," only the consideration of the characterological personality is decisive, even though in addition they are physically sick or being injured by a bad environment. A diagnosis of "psychopathy," in the sense of an intermediate stage between sick and well, has little meaning, since extensive observations have shown that the number of "psychopathic"

children who later develop real mental disease is small. Difficult children have, rather, a character structure which displays no new or inherently pathological traits and goes outside the average range with its multitudinous variations only in the excess of individual psychic directions.—P. L. Krieger (Leipzig).

5424. Sheehy, L. M. **A study of preadolescents by means of a personality inventory.** Washington, D. C.: Catholic University of America, 1938. Pp. x + 76. \$1.75.—777 children, 412 boys and 365 girls, whose socio-economic status was a fair sample of that of an urban population and whose ages were from 9 to 16 years, were the subjects of this study. The average IQ of the group was 103.4. A personality test was constructed from the items of the Bernreuter and Cowan schedules. A group of judges evaluated the items and also scored them for indication of maladjustment. The test is presented in an appendix. Test-retest reliabilities for two groups were .90 and .77. Correlation of scores of 61 pairs of siblings showed more relationship than did scores of non-siblings. Personality traits that develop with age are desire for social approval, aggressiveness, self-reliance, absence of ideas of reference or persecution, and day dreams; this development showed a low correlation with developmental age. Boys were found to be more dominant, fearless, revengeful, and boastful, and girls were more nervous, moody, suspicious, social, and fanciful than the corresponding members of the opposite sex. Teachers' estimates and pupil self-estimates "show more approach to agreement than a trend to disagreement. Case studies confirm sufficiently although not perfectly the child's test appraisal of himself."—C. N. Cofer (Brown).

5425. Sherman, M. **Schizophrenic-like behavior of children.** *Proc. 3rd bienn. Mtg Soc. Res. Child Develpm.*, 1939, 73-80.—17 children were subjected to observation for periods of from 6 months to 4 years in an effort to describe juvenile schizophrenic conditions and to differentiate such abnormalities from phenomena directly dependent upon the experiential backgrounds of children. No definite pattern of physiological defect was discovered, and intellectual development manifested no profound disturbance except for a marked scatter of achievement. Verbal ability consistently showed a relative superiority to other test functions. Serious judgmental defect was exhibited in practical social situations involving emotional adjustment. Delusional systems, rarely systematized, appeared not infrequently.—R. C. Strassburger (St. Joseph's College).

5426. Shirley, M. **A behavior syndrome characterizing prematurely-born children.** *Child Develpm.*, 1939, 10, 115-128.—A number of studies on persons born prematurely are reviewed. This study reports observations on 95 prematures who were 6 to 30 months old at the cessation of the study. Gesell-type examinations were secured on 65 of the children; the other 30 furnished more complete mental-test

results. A prematurity syndrome is described. It includes auditory and visual keenness and peculiarities, difficulties with pronunciation, retardation in manual and fine motor control, characteristic gestures and tremor, poor posture and locomotor control, extremes of activity, slow acquisition of sphincter control, brief attentivity, distractibility, irascibility, stubbornness and negativism, shyness and dependence on the mother, perhaps high and versatile esthetic interests. A more complete manifestation of the syndrome occurs in boys than in girls. Other studies are cited as confirmatory of these observations. Interpretive comments are made in relation to the causation of the syndrome and to the importance of study of prematures for testing of psycho-analytic notions.—C. N. Cofer (Brown).

5427. Shock, N. W. **Physiological factors in mental development.** *Rev. educ. Res.*, 1939, 9, 103-110.—This is a review of the recent literature (July 1935 to August 1938) organized under the following headings: nutrition, diabetes and intelligence, thyroid function and mental development, pituitary function and mental development, skeletal maturity, sex glands and sexual maturity. A bibliography of 47 titles is supplied.—M. Keller (Butler Hospital).

5428. Shuttleworth, F. K. **The physical and mental growth of girls and boys age six to nineteen in relation to age at maximum growth.** *Monogr. Soc. Res. Child Develpm.*, 1939, 4, No. 3. Pp. 291.—The monograph as a whole is devoted to anthropometric measures. Data presented in Chapter 8 indicate that in both sexes early ages of maximum growth (in standing height) are associated with slight mental superiority (only infrequently statistically reliable, however). Cross-sectional and longitudinal studies conflict as to whether the IQ differences become smaller or remain constant with increasing age.—R. R. Willoughby (Brown).

5429. Smith, J. R. **The "occipital" and "pre-central" alpha rhythms during the first two years.** *J. Psychol.*, 1939, 7, 223-226.—Two distinct alpha rhythms are in evidence in the electro-encephalograms of the normal child. The occipital alpha rhythm shows up first at about 4 months of age and progressively increases in frequency following its inception. The pre-central rhythm can be recorded at birth with a rate of about 7 waves a second and remains unchanged until about the end of the first year, when it begins to increase in frequency in a fashion which parallels the development of the occipital rhythm during this period.—J. McV. Hunt (Brown).

5430. Smith, S. **Age and sex differences in children's opinion concerning sex differences.** *J. genet. Psychol.*, 1939, 54, 17-25.—In a list of 33 traits, such as being bossy, quick to anger, friendly, truthful, 17 experienced teachers agreed that 19 traits were considered desirable (D) and 14 undesirable (U) by school children. When 100 boys and 100 girls in each year-of-age group from 8 to 15 yrs. assigned each trait primarily to boys or to girls, the results

showed that: (1) as age increases, both sexes reveal a progressively better opinion of boys and a progressively poorer opinion of girls; (2) each sex is more likely to claim D traits than to impute U traits to the other; (3) sex allocation of U traits changes more markedly with age than does allocation of D traits, and shows higher correlation between boys' and girls' opinions.—*D. K. Spelt* (Mississippi).

5431. Smith, S. R. The general practitioner remembers that the child has emotions. *J. Indiana St. med. Ass.*, 1939, 32, 21 ff.—(*Child Develpm. Abstr.* XIII: 885).

5432. Sontag, L. W., & Richards, T. W. Growth in relation to activity and social adjustment. *Proc. 3rd bienn. Mtg Soc. Res. Child Develpm.*, 1939, 89-91.—A report of specific physical growth-behavior relationships which have been subjected to observation.—*R. C. Strassburger* (St. Joseph's College).

5433. Steinhardt, T. *Schlafstörungen im Kindesalter*. (Disturbances of sleep in childhood.) *Beih. Arch. Kinderheilk.*, 1938, H. 17. 1-30.—Disturbances of sleep in children are considered under two heads, those affecting the time required to fall asleep and those occurring during sleep. As a rule the first group are primarily the result of faulty habit training, though there is little doubt that the general physical and nervous condition of the child also plays a part. The second group, which includes extreme restlessness during sleep, recurrent dreams of an unpleasant nature, night terrors, somnambulism, and in some cases nocturnal convulsions are usually the result of some extreme shock or anxiety experienced by a child of unstable neurological constitution. The author considers that in most cases somnambulism may be looked upon as the psychological equivalent of pavor nocturnus, and that treatment should involve a careful investigation of the life history of the patient in order to uncover the source of the fear and to restore confidence and a sense of personal security.—*F. L. Goodenough* (Minnesota).

5434. Stirnimann, F. *Das Kriech- und Schreitphänomen der Neugeborenen*. (The creeping and stepping phenomenon of the newborn.) *Schweiz. med. Wschr.*, 1938, Part II, No. 51, 1374-1376.—Stirnimann investigated certain reflexes, including the creeping and stepping phenomenon, in 75 infants from the third to the fifth month. These are lost later. Neither the method of delivery nor the child's stage of development is the cause of this.—*P. L. Krieger* (Leipzig).

5435. Stone, C. P., & Barker, R. G. The attitudes and interests of premenarcheal and post menarcheal girls. *J. genet. Psychol.*, 1939, 54, 27-71.—To discover whether premenarcheal and post menarcheal girls of the same age and social status reveal significant differences in answering an attitude-interest questionnaire, more than 400 such items were administered to some 950 junior high school pupils, 139-186 mos. of age. All subjects were American born, of middle and north European stock, and complete data were available concerning menstrual development, physical status, socio-economic status, school grade, and intelligence. The subjects were classified into 5 age groups, and answer-frequencies for menstruating and non-menstruating subjects at each age were treated statistically. Group differences indicated that post menarcheal girls display greater interest maturity, more heterosexual interests, more interest in self-adornment, more interest in day-dreaming, and less interest in strenuous games than do premenarcheal girls. Pubescent subjects did not report family friction more frequently than non-pubescent subjects. The questionnaire used is included in an appendix.—*D. K. Spelt* (Mississippi).

5436. White, M. A., & Williams, H. M. The approach-withdrawal pattern in the social behavior of young children. *J. genet. Psychol.*, 1939, 54, 73-84.—Each of 53 kindergarten children, 55-68 mos. of age, was observed for 10 5-min. periods during the fall semester and 7 5-min. periods during the spring term. The number of social contacts was recorded and degree of social contact rated on a scale, from 1.0 ("initiates, participates in and actively seeks to continue the contact") to 7.0 ("avoids contact; seeks actively to get away"). Scale values were determined, using mean ranks, from the rankings which 20 judges assigned to the descriptive categories. Results showed that some children make more than twice as many contacts in 5 mins. as do others, but there were no sex differences. Variation in degree of contact is as great for the individual as for the group. No marked formation of cliques occurred, and the identity of "children most frequently contacted" changed markedly during the year. The total number of contacts per child increased significantly from fall to spring, without attendant alteration in mean degree of contact.—*D. K. Spelt* (Mississippi).

[See also abstracts 5058, 5069, 5183, 5230, 5261, 5274, 5287, 5322, 5368, 5383.]

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